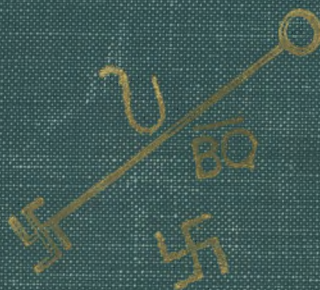


*Between
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*Grant
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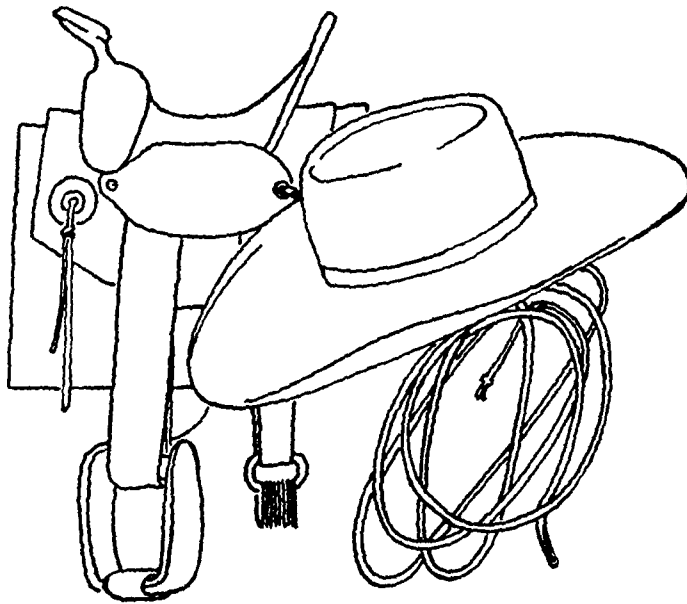
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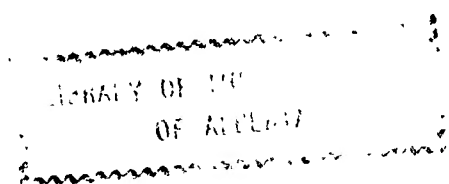
BETWEEN THE RED AND THE ROCKIES



By GRANT MacEWAN

UNIVERSITY OF TORONTO PRESS : 1952

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*To Heather
who was shaking the table much
of the time when her daddy was
writing this story*

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Preface

AGRICULTURE, life-blood of all nations, was born in the Old World before the dawn of history and cradled with the earliest civilizations. In the New World, more especially in the western section of the North American continent, the record of agriculture is brief. But though brief, it is none the less dramatic; the transformation of the Great Plains, so recently a limitless buffalo-pasture lorded over by a semi-savage race, to organized farms and ranches, in an astonishingly short space of time, must be included among the notable chapters in world history.

Canadian agriculture began in the East and moved westward at an irregular pace. In contrast to the western aborigines, who were a non-agricultural race, the eastern tribes of Indians cultivated a little land and grew several species of crops for the purpose of supplementing the wild meat in their diets. Similarly the first white agricultural settlements were on the Atlantic coast, and for three centuries the West was left to the fur traders. But once started, the western wheat fields extended at a rate which had no parallel in world history. All Canadian life was affected. In a very real sense, wheat built a nation.

The agriculture of Western Canada has thus a personality

that is rich and colourful. The story of its romantic rise should reveal entertaining, academic, and cultural values and is one that should be told in school and college classrooms.

In the years which followed Confederation, events west of Red River were of the greatest political significance to Canada. One has but to recount the uprisings of 1870 and 1885, the establishment of law and order by the mounted police, the formulation of Indian policies, the ambitious rail construction, the feverish expansion when immigration was at its peak, the wealth produced in the western grain fields, and the hardships and losses during the drought years. Mistakes were made, many of them, but some new records in human achievement were made also. The conversion of half a nation from wilderness to an enterprising agricultural community in a single generation is without parallel.

Indeed the record, imperfect as it may be, has much of practical value to offer. The best plans for agriculture's future in this land will not be drawn without an understanding of its brief but romantic past, the mistakes and the triumphs.

A review of western agriculture, with its ups and downs, should help farming people and others to strike a happier balance between the buoyant optimism of 1909 and the death-like pessimism of 1937. The next fifty years may not witness such dramatic changes as the past half-century produced, but it is to be hoped that the changes will be along sound lines, with broader interest in diversification, a determination to conserve soil, and a new emphasis upon homes. Western agriculture has traditions which are attractive and useful.

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G. McE.

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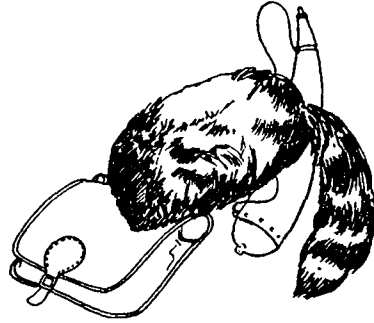
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Between the Red and the Rockies

1 The Fur Traders' Empire



BETWEEN the Red River and the Rocky Mountains, and north from the forty-ninth parallel to the Arctic, lies a region of relatively short, hot summers and uncertain rainfall. For centuries this was a region apparently unsuited to agriculture. The story of its conquest by one of the greatest wheat economies the world has yet known is an epic chapter in the history of civilization. The determinist sees this as the result of changing world conditions; the apostle of free will as the triumph of man over his environment. From either point of view the story should be of absorbing interest to students of the Canadian scene.

In the lee of the Rocky Mountains and extending all the way up the continent, from the Rio Grande in the south to the Coppermine River in the north, lies an area of plains and plateaus in which the average annual rainfall does not exceed twenty inches. In places it is ten inches or less. This area includes the barren lands of the north and the southern deserts and "dry belts." The whole region must be considered subject to the risk of periodic drought. In the far northern reaches of this semi-arid region, the shortness of the growing season and the scarcity of agricultural soil are major handicaps

to cultivation and cereal production. In the extreme south the growing season is longer but the precipitation hovers often around the danger mark. Thus throughout the Canadian West the growing season is comparatively short, and frost adds its menace to that of drought.

No force impelled primitive man to till these lands. Early agricultural communities grew up in fertile river valleys where there was little to do but fence and harvest. As overcrowding or ambition drove men to expand their holdings they would appear to have done so by trial and error. If fairly good crops could be raised on new lands without too much effort, the frontier of agriculture advanced. If there were failures it remained static or retreated. The aboriginal peoples of Canada were no exceptions to this rule. The sixty-five degree July isotherms in the regions of thirty- to forty-inch rainfall bear a close relation to the habitat of agricultural tribes in pre-European days. Beyond these limits the Indian, whether by instinct or as the result of unfortunate experience, did not attempt to crop the land. He maintained or reverted to the life of a nomadic hunter, and as such he effected, in his own way, the first conquest of the lands between the Red and the Rockies.

The ranching country of southern Alberta was occupied before the coming of the white man by the Blackfoot nation, the strongest and most warlike on the Canadian prairies. The nation was composed of the Blackfoot, Blood, and Piegan tribes, and its territory extended from the Missouri River to the North Saskatchewan and from the Rocky Mountains to western Saskatchewan. The name may have arisen from the traditional habit of painting the moccasins a dark colour or the discolouration of the moccasins by prairie fire.

These, the fiercest warriors on the plains, were traditionally at war with their neighbours, mainly the Assiniboines, occupying what is now the farming country of southern Saskatchewan and southwestern Manitoba, and the Crees,

occupying central Saskatchewan and Manitoba as far north as the Churchill River. The Sarcee tribe, living to the northwest of the Blackfoot nation, was of little importance in point of war strength and had the good sense to maintain some semblance of peace with its neighbours; but the Gros-Ventre or Big Belly tribe, until it retreated south from the Canadian scene, about the latter part of the eighteenth century, fought the Blackfoot from the latter's southeastern flank.

When they weren't fighting on their eastern and northern fronts, the Blackfoot were skirmishing with the Sioux from the south or with the Kootenay from across the mountains westward. Although the Sioux Indians belonged south of the present international boundary, they were to constitute an important factor in the affairs of British North America after 1876 when Sitting Bull and his braves fled northward across the boundary after annihilating an American force under General Custer at Little Big Horn. Such apparently was the more or less balanced Indian picture before the white man arrived to disrupt everything.

This Indian society, which the whites managed to uproot in so short a space of time, was a natural order. It was not a peaceful society and it was not particularly progressive; but in many ways it was logical and in all respects it was simple. Political and parking problems were non-existent; there were no taxes to pay, and no budgets to balance, and the women did the work. Some will question if the white man improved things much.

During their survival on this continent, the Indians accommodated themselves to their local surroundings, and the prairie tribes adopted a mode of life as distinct from that of the eastern tribes as present prairie farming methods are from those of Ontario. They depended on the buffalo as their white successors were for generations to depend on wheat. The buffalo provided food, clothing, shelter, and fuel, and when the buffalo failed, as later when the wheat crop failed, starvation was imminent.

The vastness of the prairies sometimes seems to encourage extravagant thinking. At any rate the prairie red man was not a thoughtful provider; it was a case of feast or famine with him. When game was plentiful, he killed extravagantly and ate the choicest parts only. In such seasons of abundance, the tongues and perhaps the unborn calves, both considered delicacies, were the sole parts recovered from the buffalo carcasses. The Indians of the plains were almost entirely carnivorous, and their capacity for food was very great. Eight pounds of meat per person per day was not thought extravagant rationing for a Hudson's Bay post, and in times of plenty an Indian could probably consume considerably more.

The culinary art was not highly developed and a cookbook, a clean table cloth, and the inventive genius of a master chef were not considered essential to adequate eating. About the only alternative to fresh meat was pemmican, which provided for preservation in the absence of tin cans, glass sealers, and refrigerators. It was made by mixing dried and pounded buffalo meat with fat and sometimes saskatoon berries. The mixture could be packed in rawhide sacks for curing and storage and although no salt was used, it would keep for a year or more. It was as much a staple as bread in a modern diet and it was adopted and used widely by explorers, fur-traders, and early settlers as well as Indians.

The remarkable skill with which the prairie tribes adapted themselves to their environment was in a real sense a conquest of the plains, even though it was very different from that of the later prairie farmer, and the first white men who came to the plains paid tribute to the Indians' skill by copying their ways of life. In their search for furs they adapted themselves readily to the wild free life of this hunter's paradise, and could see no other possible future for the country.

The penetration of the West even by the fur-trader was, however, a slow and difficult process. The first attempts at exploration came by what seemed to be nature's gateway,

Hudson Bay. Henry Hudson, in search of a northwest passage to the Orient, sailed the good ship *Discovery* into the great bay in 1610. He was carrying credentials from the English sovereign, James I, to whatever oriental king or ruler he might chance to meet. Good Englishman that he was, he would not be caught away from home without a letter of introduction to somebody. But it was a fateful voyage. The crew mutinied and Hudson and eight loyal followers were cast adrift on the icy waters of the Bay, never to be heard from again.

Thomas Button, with the double purpose of finding Hudson and finding a short route to the far east, reached the mouth of the Nelson River in 1612. Jens Munck, sailing under the Danish flag and with the same twofold purpose, entered the Bay in 1619 and wintered at the mouth of the Churchill River. Again the north was unlucky. Scurvy became acute and of Munck's crew of sixty-four men only three were alive in the spring to make the voyage home.

Another half century was to pass before the value of this semi-frozen gateway was to be appreciated. In 1659-60, the French explorers, Radisson and Groseilliers, travelling with Cree Indians, pushed from the Lake Superior regions in the direction of Hudson Bay. We do not know how far they went, but they sensed the possibilities of a fur trade conducted via "The Great Bay of the North" and, failing to gain support from the Governor of Canada, sought help in England. They had no trouble in selling their scheme there, and in 1668 an expedition backed by Charles II, the Duke of York, and Prince Rupert, as well as London business men, set sail for Hudson's Bay, as Hudson Bay was then called.

One of the two boats sailing under "Mr. Radishes and Mr. Gooseberry" was damaged and obliged to return to England. The other, the *Nonsuch*, returned in 1669 riding deep in the water under her cargo of valuable furs. The venture was a success and in 1670 King Charles granted a charter to "The Governor and Company of Adventurers of England Trading into Hudson's Bay." The Company's first governor was Prince

Rupert, the King's cousin. That was the beginning of the Hudson's Bay Company, destined to play a great part in the development of the new country. It was also, if people had only known it, the beginning of a two-century struggle to hold a private fur-traders' empire against the open attacks of rivals and the "insidious" inroads of settlers.

If these two and a half million square miles of western Canada had a capital in the years which followed, it was at the mouth of one of the big rivers emptying into Hudson Bay. When the Gentlemen Adventurers decided to build a fort which would withstand any attack upon their kingdom, they chose a site at the mouth of the Churchill, across from the present majestic and modern terminal elevator with its capacity of two and a half million bushels. They say that no elevator of its size in the world had so little to do in the first twenty years of its existence, and a somewhat similar comment might be made about the old fortifications.

The gentlemen of the great Company built Fort Churchill in 1689 and it burned down almost immediately. When they built another fort, they decided to have one that couldn't be destroyed by fire. The fabulous Fort Prince of Wales, whose walls are there for all to see today, was started in 1731. It stands 310 feet by 317 feet, about the size of a city block, and nearly forty years passed before the mammoth undertaking was completed. Someone accustomed to astronomical figures may estimate the tons of huge granite stones required for walls seventeen feet high and between twenty-five and forty feet thick, each big enough to completely swallow a small cottage. Heavy fortification for a wilderness, we may marvel, but they were to guard what seemed the logical approach to a realm of untold wealth.

It must be admitted that Fort Prince of Wales had an inglorious record. In 1782, the French admiral, La Pérouse, entered the Bay with three ships, and captured the mighty fort without much trouble. The French captors tried to destroy it by fire and gunpowder but it didn't destroy easily.

In time it was partially restored for the benefit of posterity, but stands as a monument to human ingenuity and determination to make money rather than as a monument to courage and loyalty.

When the traveller to the north has seen Fort Prince of Wales and realized the importance which was early attached to the north country, he should visit nearby Sloops Cove. Engraved in the rock is the famous name of Samuel Hearne, but there is also a sketch for eternity of one John Kelly being hung for the theft of a goose. Those who wintered at the mouth of the Churchill River in that pioneer period were glad to have something to do, even if it was only drawing pictures in rock.

As long as the Hudson's Bay Company was satisfied to confine its trading to the Bay, there was little incentive to inland exploration, but French competition ultimately forced a change of policy and posts were extended to points nearer the source of the furs and nearer the country which had a totally unanticipated future in agriculture. Henry Kelsey, a restless Englishman in the company's employ at Fort Nelson, made journeys into the interior in 1688, and 1689; in 1690 he set out for the land of the Assiniboine Indians, whence he returned in 1692. But, following the loss of all the Bay forts except Nelson to the French under Troyes and Iberville in 1686, the company saw things differently. Kelsey was reinstated in favour and commissioned to go inland for the express purpose of making friendly contacts with the natives and diverting furs to the company's post. In 1691, he travelled through the northern parts of what are now Manitoba and Saskatchewan, saw many buffalo, mingled with the Indians, and proved to be a good salesman for his company.

Before another such inland expedition was launched, the French-Canadian explorer, La Vérendrye, and his two sons made penetrations into the prairies from the east. La Vérendrye the elder determined in 1730 to reconnoitre westward in the interests of the fur trade, and within a few years

had forts extending to Red River. Fort Rouge was established at the forks of the Assiniboine and Red rivers in 1738 and was thus the first structure above the level of a tepee on the site which was to be Winnipeg. In the same year Fort La Reine, near the site of the present city of Portage la Prairie, was built, and from that point La Vérendrye's two sons, Louis-Joseph and the Chevalier, set out in 1742 westward and southwestward across the prairies.

Following La Vérendrye's efforts, French forts and trading posts were established along the Saskatchewan, and expansion inland became increasingly important to the Hudson's Bay Company. Anthony Henday left York Factory on the Bay in June 1754, commissioned to extend the company's business. A month later, he was paddling on the Carrot River in the central part of the present province of Saskatchewan. Travelling overland in a southwesterly direction, Henday saw buffalo for the first time on August 15. Five days later he crossed the South Saskatchewan River at a point not far from where Seager Wheeler, the first prairie wheat king, homesteaded one hundred and thirty-six years later.

It may have been courage or it may have been ignorance, but Henday, it seems, had no fear of Blackfoot Indians. Travelling away westward, he found an encampment of Bloods, perhaps somewhere near the present day Willow Springs ranch where Frank Collicutt, after 1920, grazed the biggest herd of pure-bred Herefords in the world. Henday invited himself to be a guest and the Bloods received him well. He urged them to take their furs to his company on the Bay. He spent the ensuing winter with the tribesmen without losing his scalp, and returned to York Factory in the following spring.

The return trip was almost entirely by river and, being down-stream, was made in much less time than the outward journey. The party paid a friendly visit at La Corne's Fort St. Louis, established two years before, and arrived back at York Factory just a few days short of a year from the date of

departure. But Henday's experiences furnished more evidence that the Indians could not be expected to come great distances to trade at the company's posts on the Bay when the French trading establishments were erected in the heart of the Indian country.

Samuel Hearne, also a servant of the Hudson's Bay Company, made trips from Churchill across the barren lands of the far north, and was the first to trek overland to the shores of the Arctic. His expeditions did not take him to the prairie country, although in 1774 he set up Cumberland House. However, company officials by this time realized what they were up against. There was only one thing to do—carry the trade to the Indians.

At this time, the northwestern empire of the fur-traders was just over a century old. It was to endure for almost a century longer, but historical events were already sowing the seeds of its disruption. The cession of New France to England in 1763 had opened the inland waterways to "Canadian" traders of a new type, operating from Montreal. Some of the ambitious merchants heading the new companies came from the English colonies to the south; many of them were canny or reckless Scots; on the whole they seem to have combined the unscrupulousness which Haliburton's Sam Slick attributes to "Yankee pedlars" with the obstinacy which has periodically decimated the clans in support of lost causes. They were formidable rivals of the older company.

The Frobisher brothers from Montreal were among the first to penetrate into the northwest. In 1774 Joseph Frobisher pushed as far north as the Churchill River, where he intercepted the Indians from up country on their way to Fort Prince of Wales. To the English company this was a punch below the belt. And worse was to follow.

The Frobishers took a Montrealer with capital into their business, James McGill, later the founder of McGill University. Then they entered into a co-operative arrangement with Alexander Henry the elder, who had been trading with the

Indians about Fort Michilimackinac as early as 1761. This was a marketing pool, the first in the country, and it grew as other traders joined. It marked the beginning of the North West Company, an organization which became weighted with names like Alexander Mackenzie, Duncan McGillivray, Simon McTavish, and Simon Fraser—apparently the MacEwan clan was one of the few not represented.

In both companies there were brave and inquisitive souls, men who did fine service in exploring and opening up the country. David Thompson, who served both the Hudson's Bay Company and the North West Company, stands out as a particularly strong character both mentally and morally, and one who contributed more than any other to exploration in what was destined to become the agricultural part of Western Canada. "Nor' Wester" Alexander Mackenzie assigned himself the task of finding a short and economical water route connecting the fur country with the oceans. Finding it neither in the Mackenzie River which, as he discovered in 1789, flowed north into the Arctic, nor yet in the Peace and Fraser Rivers (1793), he turned to look with renewed envy upon Hudson Bay, through which all traffic was controlled by the great rival company.

With McGillivray, who became president of the North West Company, devoted to the same cause of finding a cheaper route, the Hudson's Bay Company was offered £2,000 per year for the privilege of bringing supplies in and shipping furs out by "the Bay." The offer was refused with a good deal of smug satisfaction, but the "Nor' Westers" lost none of their determination to share the use of Hudson Bay for their trade. Bitter rivalry culminated in bloodshed, and finally in 1821 the two organizations were united under the name of the pioneer company.

It might have seemed, with this union, that the fur-traders' empire had been saved and that the Northwest would remain a hunter's paradise for centuries to come. But the cession of Canada to the British had not only brought the Montreal

traders into the picture. It had also freed the American colonies of the south from their dependence on the mother country for defence against French colonial aggression. The wave of expansion for which the Thirteen Colonies were already ripe was repelled severely by the extensive boundaries established for Canada, and colonial anger over the Quebec Act was a factor in bringing about the American Revolution. The true pioneer was already finding the Atlantic coast too crowded, and as economic conditions in Europe stimulated emigration to America, successive waves of frontiersmen spilled over farther and farther into the West. Children and grandchildren of loyalists who came in good faith to Canada after the American revolutionary war turn up in the pioneer records of Illinois, Iowa, Wisconsin, and the western states. European settlers were moving into the Atlantic seaboard and the lakes area and pushing westward. Expansion was in the air, and the frontier of settlement was moving westward visibly from day to day.

At first, this might not have seemed a serious threat to the fur-traders' empire. Naturally and practically, the westward movement on this continent kept well to the south of the Laurentian shield and the sixty-five degree isothermic line, on the lands which seemed more immediately promising for agriculture. But when ideas are in the air, no one is immune. It was Hudson's Bay Company men themselves who sponsored the Red River settlement, thus establishing in their midst the vanguard of that force which, rather than any rival company, was eventually to prove their undoing.

Agriculture slipped into the Canadian Northwest meekly and unobtrusively, as the handmaid of the fur trade. Vegetables and, in a few instances, wheat and barley were grown on small plots for the sole purpose of supplying food for the occupants of the forts or posts, and the farther the traders got from their bases of supplies the more important these became. Professor A. S. Morton, in his *History of the Canadian West*, draws attention to a minute from the

committee of the Hudson's Bay Company, dated May 16, 1674: "Ordered that there be provided . . . a bushel of wheat and rye, barley and oats, or a barrel of each in casks, and such sorts of garden seeds as the Governor shall advise."

A letter to the Governor of the Hudson's Bay Company in America, dated May 29, 1680, stated that swine were being sent out to be propagated on Hayes Island. In the following year a letter, in Morton's files, to Governor Nixon reads: "We have sent 1 he Goate and 2 she Goates, 1 sow with Pigg which we have done in hopes thay will increase in ye Country and be of use and comfort to our people which is a thing that deserves your utmost care as well for the Good of the Factory as for the ease of the Compa. in the business of Provision."

In 1733 La Vérendrye sowed peas and corn on the southwest shore of the Lake of the Woods near the site of the reserves where his Indian allies, as pointed out by Irene Moore in her *Valiant La Vérendrye*, today raise large crops of cereals. The first horses in what is now Manitoba were two head which his sons brought back from the southwest where the animals had bred from Spanish stock, and the Indians of the northwest soon became skilful horsemen. It was another Frenchman, La Corne, who made some experiments in the growing of wheat in the Carrot River Valley, Saskatchewan, between 1753 and 1756. The first attempts by Englishmen in that area were at Hudson's House, about thirty miles west of Prince Albert, where barley and cabbages were grown about the year 1780.

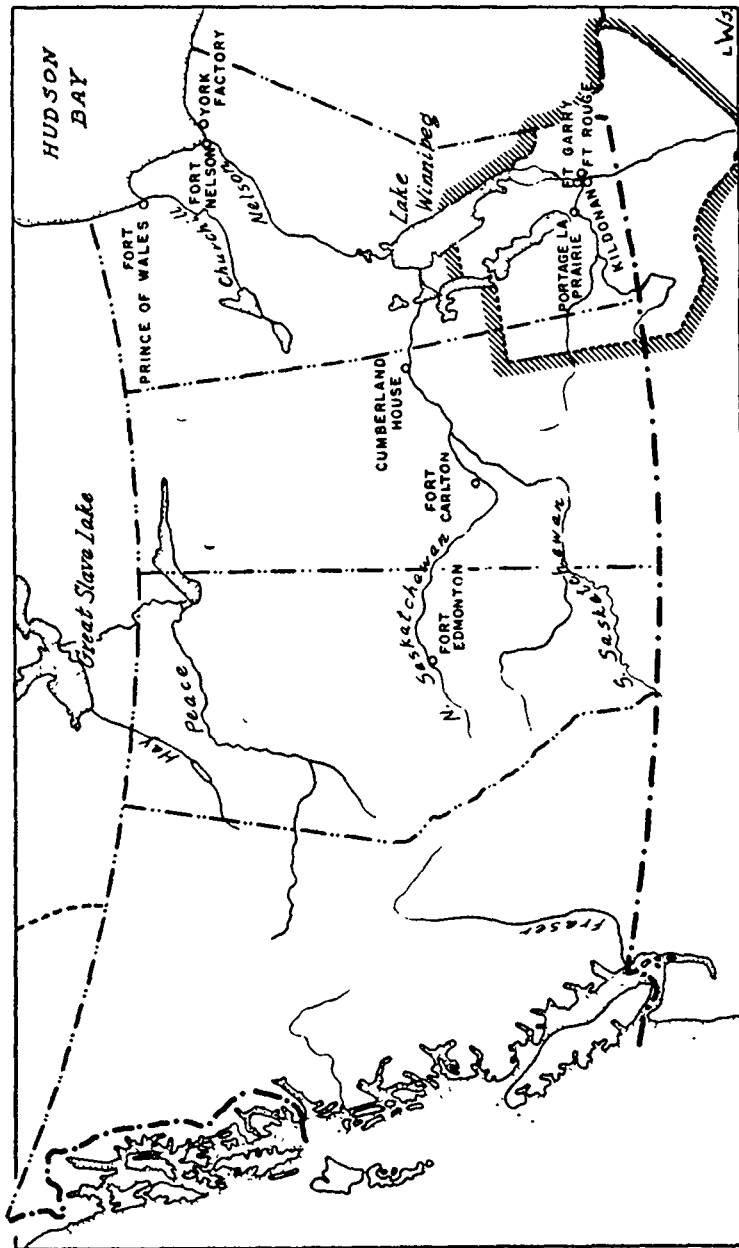
Alexander Henry, the younger, harvested fifty bushels of turnips and eighty bushels of potatoes at an Alberta post in 1809, and reported on the barley crop at two posts in 1810. It was news in 1811 that the hens at Fort Edmonton began to lay on January 6. The Hudson's Bay post, Carlton House, was reported to be growing wheat, barley, oats, and potatoes before 1820. And when Governor Williams was resident at Cumberland House, before the amalgamation of the two

companies, he created a farm, grew barley, and brought in horses, cattle, and pigs.

The success of these experiments suggested the possibility of doing something on a larger scale. Fur profits were not as large as they had been, and it would be fine if the cost of transporting flour and other food products across the Atlantic to the company's posts could be wholly or almost wholly eliminated. Potatoes and corn, if grown in sufficient quantity, would provide added security against famine. It was no doubt the fusion of such ideas with a sympathetic consciousness of the problems of evicted Scottish crofters, and a general awareness of the developing westward trend on the North American continent, which led Lord Selkirk to sponsor the Red River settlement in the early years of the nineteenth century.

Whether by accident or by design, Selkirk located his new settlement in the only district in Western Canada where an annual precipitation of over twenty inches is combined with a July temperature of over sixty-five degrees. Even there the settlers encountered many privations and setbacks. In fact the extent to which these experienced farmers had for some time to depend on supplies, equipment, and even food brought in from outside suggests that the Indians, with their primitive equipment and lack of outside resources, had been following the wisest course in leaving agriculture strictly alone.

After a rough voyage of sixty-one days, with sickness on board, the first Selkirk colonists had to winter on the shores of Hudson Bay, thus throwing out their whole schedule. When they finally reached the forks of the Red and Assiniboine in the spring of 1812, food was scarce and they were unable to get shelters prepared in time for the main body of settlers, so that all were obliged to spend the second winter farther south at Pembina. In the spring of 1813 they returned to their chosen site and Peter Fidler came down from Brandon House to survey the long narrow hundred-acre farms. These fronted on the river, after the fashion in Quebec, since the river was



THE SELKIRK LAND GRANT OF 1811

the main highway. In the spring of 1814 forty-one Highlanders, men and women, walked overland from Fort Churchill to York Factory carrying seed potatoes and cereals, while two hundred more, mostly from Kildonan, arrived in the following year. But the settlement was not all English-speaking. There were also a good many French and Métis, or French halfbreeds, on those familiar-looking long narrow farms. The Selkirk settlers were expected to pay five shillings an acre for their land but, after several difficult years, Lord Selkirk inaugurated Western Canada's first "debt adjustment" plan and cancelled the charge.

Things did not go too well with the young settlement. The first cereal crops all failed. Winter wheat planted in the spring did not come up at all, and what grains did come up were taken by the early frosts. Potatoes planted in July were completely wasted. Nor had the settlers better luck with their livestock. Adam and Eve, a bull and yearling heifer that had joined the party at Oxford House in 1812, had been supplemented by a bull, a cow, and a yearling heifer, bought from the North West Company. This second bull became vicious and had to be slaughtered in the fall of 1813. There was no reason to suspect that he was a saboteur for the North West Company; it was nothing more than a certain capriciousness to which a bull has first claim. In the following February, however, when the other male of the species exercised a bull's prerogative and strayed, gloom fell over the remaining members of the herd. Indeed, the whole settlement grieved when Adam's dead body was seen floating down the river with the ice as it went out in the spring.

The Selkirk settlers had to confront not only a strange and hostile climate but enraged and antagonistic men. Whether by accident or by design the new settlement lay in the debatable land where the two fur companies operated in rivalry and squarely across the staging route of the Nor' Westers. To the frontiersman's general suspicion of anything smacking of civilization was thus added, not unnaturally, a conviction that any development sponsored by the Hudson's

Bay Company was unlikely to benefit its North West enemies. Thus in 1815 and again in 1816 the Nor' Westers expelled the settlers by force of arms and with bloodshed.

Enemy action, bad weather and starvation failed to daunt these Scottish settlers in their epic struggle to establish agriculture in the Red River Valley. Always they returned, to regain the lost ground and move a bit forward. On his way to their relief in 1816, with a party of soldiers, Lord Selkirk captured the North West Company's post at Rainy Lake and commandeered its seven cattle, three oxen, three cows, and a young bull. Two of the oxen were shod for freighting. An unshod ox slipped on the ice and injured himself; he was killed for meat and the young bull hitched in his place. Even the cows were requisitioned to furnish power to move the loaded sleighs. The country seemed to be especially hard on bulls, and soon after arrival the new herd leader died. Then some of the females fell victims to hungry halfbreeds. Undiscouraged, Lord Selkirk imported calves from Orkney, and in 1820, 1821, and 1822 attempts were being made to drive a herd in from the United States in spite of all sorts of trouble over passports and grazing rights en route.

Proudly contemptuous of the hardy Highland sheep, Selkirk had sent out twenty-one Spanish Merinos with the colonists of 1812, but "leap year is never a good sheep year," according to an old English proverb, and the flock soon became extinct. Blame must be divided between dogs, Nor' Westers, the settlers themselves for their poor care, and the inclement lambing weather in the spring of 1813. No second attempt was made until November, 1832, when a sheep-purchasing commission left Fort Garry for the United States with two horse-drawn carts and saddle horses for ten men.¹ Following the course of the rivers, hurrying through Indian territory, particularly the Sioux country, travelling from three a.m. to sundown, with a watch set each night, they completed the eighteen-hundred-mile journey, partly by

¹Diary of Robert Campbell, member of party, loaned to me by Harry Maltby.

wagons, partly by sleighs, partly by canoes, and the last part on foot, and on January 3, 1833, arrived at St. Louis. Eventually they carried the search into Kentucky, where they bought 1,370 sheep. At first the sheep travelled well, ten or twelve miles a day, although a few became lame and had to be sold. On June 8 "for the first time, [they] saw that dreadful scourge, the spear grass growing thick along our route," worse even than lameness, rattlesnake-bites, flies, or maggots. In mid-June they halted to shear, but the local people, supposing that the wool would be left behind if not sold, wouldn't buy, and the Canadians decided to burn it. As a result of sales and deaths, less than one-fifth of the original flock reached the Red River settlement on September 16, 1833.

"Hens were brought from Sault Ste. Marie, also from Prairie du Chien on the Mississippi," according to Joseph, later Bishop, Provencher, a young French-Canadian priest who came as a missionary to the Métis in 1818, but "in 1822 there was only a couple left in the whole district. A careful man succeeded in their reproduction, and it is from this unique couple that the hens, which are now many [in 1836], have all sprung." Although turkeys were native to the continent they had not been domesticated by the Indians and were imported, with geese, via Hudson Bay. They were still few in number in 1836, lamented Provencher, who was interested in the encouragement of agriculture, and doubtless, like a true Frenchman, had a discriminating taste for a *poulet* or *dindon rôti*.

There was much to learn about the vicissitudes of the new soil and climate before field crops could succeed. An early frost caused severe damage in 1817. Next year grasshoppers came late in the season, uninvited and unannounced, probably Rocky Mountain locusts noted for their migratory marathons, and the long-suffering settlers with their wives and little ones had to hand-pick the heads of wheat and barley cut off by the invaders to save some seed. Pest controls were unknown, and hoppers took the crops again in 1819 and 1820. Seed stocks were so depleted that in February, 1820, a party from Red

River travelled, mainly on snowshoes, to Prairie du Chien in United States territory to buy two hundred and fifty bushels of seed wheat. Brought back by flat boats in the spring when the water was high in the Red River and its tributaries, the seed cost ten shillings per bushel.

Other disasters followed. In 1825, for some unaccountable reason, mice were especially numerous, and their attack upon the grain, both before and after it was stacked, cut the yield seriously. In 1826 floods came.¹ Heavy rains had fallen in the preceding autumn; the winter snow had been heavy and the spring was late. On the second of May the Red River came up nine feet. It continued to rise for several days, overflowing its banks and driving the settlers from their homes to take refuge on higher ground. Any buildings and equipment that were not well anchored were carried away in the direction of Lake Winnipeg. Alexander Ross, in *The Red River Settlement*,² states that the water came up a total of fifteen feet. Seeding was delayed until the fifteenth or twentieth of June and much seed was lost, but not the seed wheat which had been stored in the church spire, and which went up from two to fifteen shillings per bushel.

It is all very well to learn by mistakes but it would be very extravagant if the same mistakes were repeated on all the farms in a community. Lord Selkirk saw that an experimental farm would benefit agriculture in the Red River settlement, and in 1821 the company started Hay Field Farm, an elaborate dairy project with almost everything except cows. The house erected at a cost of £600 brought more ridicule than admiration. Seven pigs of unknown breed and colour were delivered by sled across frozen Lake Winnipeg and,

¹The next serious Red River flood was in 1852 when the stream ran six miles wide in places.

²Alexander Ross, the Red River historian, had been in the service of both the North West Company and the Hudson's Bay Company, and in 1825 accepted an assignment to teach school at Red River. Within a year after his arrival, he witnessed the great flood of which he left an oft-quoted record. He was appointed to the Council of Assiniboia in 1839 and was also a sheriff in the settlement. Shortly before his death in 1856 he published two books, of which the best known is *The Red River Settlement*.

being no more co-operative than modern swine, had to be tied down on the sleighs. One can imagine the fiendish squeals which raked the peaceful quiet of the unsuspecting north as those precious pigs were tenderly portaged, "wrapped" in blankets and buffalo robes to prevent them from freezing while in transit. These were not the first pigs in the colony, however, for there were seventy in 1819 when the loss of crop by grasshoppers compelled settlers to gather acorns to feed their swine during the winter.

This farm was not a success, and a second was started in 1831 under Chief Factor McMillan and that Robert Campbell who left us the story of the sheep drive. Campbell set up his tent at the new location on May 1, and soon had up to forty men building, ploughing, and haying.

Alexander Ross records that "cows of the best breed were purchased" and the stallion Fireway was brought out from England at a cost of £300. According to Simpson, then governor of the Hudson's Bay Company, he was "looked upon as one of the wonders of the world by the natives, many of whom travelled great distances with no other object than to see him." Colonel G. L. Greenlay, writing to me in 1940, said he believed him to have been "of the breed known as the Norfolk Trotter, the forerunner of the Hackney," carrying "the blood of both the Godolphin and the Alcock Arabian, which makes him a near relative of the Hambletonian and some of the other well known breeds found in the United States." Campbell's diary describes him as "a splendid bright bay, standing 16 hands and very stoutly built, with a faultless shape. He was warranted to trot 15 miles an hour and could do much better." Brood mares were brought in from the United States and the most approved types of farm implements, ploughs, drills, harrows, axes, and milk pails, were imported. But in November, 1832, Campbell set off on the notable sheep-purchasing expedition and thereafter things went badly.

Captain George Marcus Carey, a Londoner, was engaged to manage the third and most ambitious experimental farm sponsored by the company in 1838. The site was north of the

point where the Assiniboine enters the Red and near Old Fort Garry. Twenty acres of crop land were prepared in the first year, and the sheep flock grew to three hundred head under a well-qualified shepherd, brought from Scotland. But the labourers from England were apparently "notorious beer-drinkers"; their appetites for food were no less immense and it seemed to take all that the farm would grow to feed them. Like the preceding efforts, the third experimental farm was short-lived and ended in virtual failure.

Another discouraging feature of the early days was the failure of a number of attempts to find outside markets. One of the reasons for establishing the settlement had been to supply agricultural produce for the trading posts and save transportation costs from England, but company officials contended that supplies from Red River were not dependable. When Governor Simpson spurred the settlers to greater efforts overproduction forced down prices, as was to happen more than once in Western Canada. Flour dropped from 16s. to 11s. 6d. per cwt., butter from 1s. to 7d. and cheese from 6d. to 4d. per pound. Settlers complained about the falling prices and consumers countered with complaints about low quality. The butter and cheese were said to be bad beyond description, while the flour was "heated" and sour and quite unfit for making bread. Alexander Ross considered the flour to be "altogether of so very bad quality as to be only fit to poison pigs" and the butter "scarcely fit to grease cartwheels."

Smut in the cereal grains was a problem then as it is today. But with no smut-mills in the colony and no means of chemical control, this plant disease spread alarmingly and flour was contaminated. Threshed on ice-floors, grain was often damp and badly stored; coupled with smut, this produced flour which, on the whole, increased the popularity of pemmican.

For a while the company bought wheat and did its own milling, but company storage facilities were little better than those on the farms and Ross, who evidently had the olfactories of a sanitary inspector, tells:

... large quantities of dried buffalo meat had been stored up in the same buildings, the daintiest fragments of which were carried off by the mice and mixed up with the wheat, making a compound of wheat, smut, icicles, dried meat, mice, and mice nests, all more or less heated together, and forming a mass of impurity: the smell of which, without the hazardous experiment of tasting, was absolutely disgusting. In this state, despite all the advice to the contrary, and the certainty of bringing disgrace upon the colony, the wheat was ground and the flour shipped off to the different trading posts. The writer having a mill was among those patronised on this occasion and can bear witness that the smell was intolerable.

But Ross was not one to spoil a story for lack of a little embellishment and one may make some justifiable allowance in favour of the settlers.

Other plans for securing an outside market also failed. Flax and hemp were being grown and the fibre used by the settlers. The officials entertained visions of an export trade in goods made from flax and hemp and accordingly offered premiums for high quality. The premiums were paid but the market failed to materialize. Farmers had better luck with swine, however. Pork offered a refreshing change from buffalo meat and pemmican, and before long cured hams became an article of trade with the western posts.

Ever anxious to discover a commodity that might be produced for export, Governor George Simpson sponsored the Tallow Company. Capital was placed at £1,000, with two hundred shares to be paid for in cattle. Yearling cattle were valued at £1, two-year-olds at £2, and three-year-olds at £3. A herd of 473 head was assembled in the spring of 1833 and the animals branded "T.T.," for Tallow Trade, but losses from a spring storm, inadequate winter feed, and killings by wolves were so discouraging that the plan was dropped and the herd sold by auction. The loss sustained by the shareholders was made good by the Hudson's Bay Company.¹

The most far-fetched experiment in seeking outside markets followed the extinction of the little flock of imported sheep. Still convinced that the colony needed wool and that

¹Private traders in tallow, however, were said to have been discouraged by the Hudson's Bay Company, and even refused shipping space, according to evidence given before a committee of the British House of Commons in 1857.

it might be baled and sent by York boat and even by portage for shipment by Hudson Bay, somebody came up with a bright question, "Why not use buffalo wool?" John Pritchard, a clever promoter, formed the Buffalo Wool Company in 1821, and shareholders had visions of fabulous wealth and retirement on the Riviera. High-priced equipment was imported and big wages were paid. But the product was really hair, not wool. In the Old Country, where it was shipped for spinning, the long guard hairs which were intermixed with the undercoat of soft hairs caused technical difficulties and manufacturers lost what little interest they had shown. It was but a short time until the Buffalo Wool Company was bankrupt and the shareholders poorer and wiser.

The comparative failure of the Red River settlement and its backers, the Hudson's Bay Company, to build up an export trade for the young colony underlines the fact that these first western farmers were subsistence farmers not agricultural industrialists. They came to make homes and wrest a living from the untried soil; they hoped for peace and security, but they found chiefly hardship and suffering. In a country which had never been farmed, and which offered no precedents to guide newcomers, poor equipment and unfavourable crop conditions resulted in repeated setbacks. Nearly twenty years elapsed before the settlers were able to enjoy any measure of security, and before a real agricultural industry could arise on the banks of the Red and the Assiniboine many features would have to change in the political, economic, and social set-up.

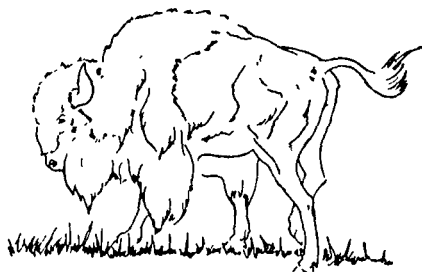
At the same time, the settlers had shown that they were able to move with the times. A windmill sent out from Scotland by Lord Selkirk to replace the primitive hand "querns" and returned as too complicated to set up—for the farmers of that day were biologists rather than engineers—was reshipped to the colony in the care of a Scottish millwright. The total cost is estimated as not less than £1,500, but as Logan's Mill it gave yeoman service, and was the first of many expensive mechanical devices which later studded the prairies. The real beginning of

the mechanization which made Western agriculture possible came in 1824, with the introduction of the plough.

The plough was about as spectacular and startling as Alexander Graham Bell's first telephone. It was made in the settlement from iron imported from Britain and freighted from York Factory, costing 1s. per pound, with an additional 3d. for freight. This was the "year of the big crop," which was talked about for a decade. The land yielded 44 bushels per acre from ploughing and 68 bushels per acre from hoeing, and sceptics concluded that the new-fangled gadget would never replace the good old-fashioned spade and hoe. Such sceptics could not halt progress, however, and of the agricultural revolutions which lay ahead, one of the most spectacular was in the field of farm machinery.

The experience of the pioneers of the Red River Valley in this first decade thus indicated not only the problems which had to be faced but to some extent foreshadowed their solution. The problem had been set. In this rigorous climate, subject to plant diseases and pests, at a distance from markets, could agriculture establish itself? Already, in their short-lived experimental farms, in their first tentative experiments with machinery, in their ingenious efforts to produce for England, the Red River settlers were displaying that empirical approach which was eventually to find the affirmative answer. But as yet few, if any, saw the issue clearly. Although the stallion Melbourne had succeeded Fireway, and other mares had been imported, the colonists still got most of their horses from the Indians. The buffalo was still an important item of subsistence. The settlers still travelled by canoe and York boat, up river to the United States or down river to Hudson Bay, and only the most tenuous overland communications connected them with the growing British population centre in the Canadas. They were a little island of subsistence farmers in the midst of a great sea of Indian territory that was still a hunters' paradise and that was to remain the empire of the fur traders for another three or four decades.

2 *The Agricultural Explorers*



THE monopoly under which the Hudson's Bay Company traded in the northwestern territory beyond Rupert's Land had been granted for twenty-one years at a time. In 1838, the year in which the Selkirk settlement opened its third experimental farm, attention was concentrated on the disturbed state of Upper and Lower Canada, and the licence was renewed by the British Parliament with little discussion. During the next twenty-one years enormous changes took place in the western part of the continent. American settlers sweeping into the Oregon territory had pushed back the British boundaries in that region, and in the late 1840's American traders made their appearance in the Red River settlement. The settlers were forbidden to sell them furs or hides, for the company was very rigid in maintaining its monopoly, but it was impossible to enforce the regulations, especially among the Métis, who still lived largely by the hunt.

By 1859, when the licence was due for renewal, an American steamboat on the Red River furnished easy connection with St. Paul. The government of the United Canadas, Ontario and Quebec, was beginning to cast

interested eyes on a territory which could absorb a great influx of settlers, and, the trade of which might bring business to the expensive canal system the Canadian Government had set up on the Great Lakes and the St. Lawrence. Neither the colonies nor the mother country could view with equanimity any further American expansion in the Northwest, but it was questionable if a wilderness could be permanently maintained. Was the territory suitable for large-scale settlement, and would this be the solution? Such were the questions which faced a powerful committee of the British House of Commons that met in 1857.

The future of the West had already been discussed by travellers, and several of these were examined by the committee, among them Colonel (Sir John Henry) Lefroy. Lefroy, who had travelled over much of the territory east of the Rockies in the early 1840's, in connection with his work as a magnetic surveyor, drew an unfavourable picture. He mentioned particularly the short growing season, resulting from early frosts. On the plains some distance westward from Red River, he believed the rainfall insufficient for crop production, and suggested that this accounted for the absence of trees.

It was probably natural that Sir George Simpson, for forty years the dominant personality in the fur traders' empire, should be of the same opinion, particularly in view of the problems encountered by the Selkirk settlers, the money they had cost the company, and the small amount of agricultural produce which they had actually furnished to it.

Rev. George Bryce, himself an outstanding western pioneer, gives an appreciative and entertaining account of the examination of Sir George in his *Mackenzie, Selkirk, Simpson*. Bryce, with his background, could relish the controversy and enter more fully into the spirit of the speakers than subsequent writers. He tells us:

The battle royal was fought, however, on the capacities of the country to support a large population. Sir George on this point took a

surprisingly firm, and even defiant attitude. Categorically asked whether a province could not be laid out which would give a livelihood to a large body of settlers, Sir George with decision replied: "I do not think settlers would go to the Red River from the United States or anywhere else for the purpose of settlement."

It was with delicious irony that his tormentor then read to Sir George the description from his own "Journey Round the World" (1847, trip taken in 1841-42) of the country lying between Red River and the Rocky Mountains: "Beautiful country . . . bright green, uninterrupted profusion of roses and bluebells, softest vales, panorama of hanging copses," and asked him if he had changed his mind. The only reply made by the governor was, "Yes, there were a great many flowering shrubs."

At another time Sir George was maintaining that the country could not support a population on account of the "poverty of the soil," that in the district spoken of the earth was frozen the year round, that any time in summer "frozen earth could be reached by digging a foot and a half into the soil"; then he maintained that the want of fuel would make settlement impossible, that the locusts would devour every green thing, and that floods were so prevalent that settlers would be driven out. "I have myself," said the governor, "paddled over the roofs of some of the houses in my canoe."

With a scathing tone his tormentor again read from the fatal book, speaking of Rainy River: "Nor are the banks less favourable to agriculture than the waters themselves to navigation . . . a gentle slope of green sward, crowned in many places with a plentiful growth of birch, poplar, beech, elm, and oak. Is it too much for the eye of philanthropy to discern, through the vista of futurity, this noble stream, connecting as it does the fertile shores of two spacious lakes, with crowded steamboats on its bosom and populous towns on its borders?"

In actual fact, apparently, some other hand than Simpson's had given the book its literary form, and Judge Thom, energetic and facile recorder of Red River, is credited with having done the job, thus becoming perhaps the first ghost-writer in Canadian literary history. The governor, in spite of his accusers, was probably quite conscientious in his evidence. Still, the committee could not be sure. There must be a systematic examination of the resources of the Canadian Northwest, not by an interested trader, still less by one of those world tourists who went to the prairies for a buffalo hunt, and, like the traveller who spends two weeks in Tibet today, knew all about it.

The colony on the Red River was forty-five years of age when Captain John Palliser, who had already spent a season hunting in the British Northwest, was formally commissioned to examine that portion of the country south of the North Saskatchewan and between the Red River and the Rocky Mountains. He spent three years on the job, and it was the beginning of objective studies in the area. Palliser was to answer some simple questions about soil, climate, and Indians. But this was no simple task and there is no more important link in the chain of agricultural adventure in a new land than the Palliser investigations.

The country had seen hunters, fighters, traders, and bemonocled adventurers; now came the scientists. This was the first attempt to approach the problem using a scientific yardstick. The party included astronomers, geographers, geologists, biologists, engineers, as well as untrained men raised in the country. There was another classification, quite unscientific and, according to later traditions, unwestern, which grouped the personnel as Gentlemen, Scotch halfbreeds, French half-breeds, Americans, Canadians, "and one coloured man, Dan Williams." Dr. Hector, who was a distinguished naturalist and, in the words of Palliser, "the most accurate mapper of original country I have seen," remained with the expedition for the three seasons and greatly aided the work.

The reports made by Palliser and his associates were voluminous and well prepared, although for several decades they remained almost unnoticed. But seventy years after the completion of the study, when the Canadian prairies were suffering from a succession of drought years, the Palliser reports were resurrected and "Palliser's triangle" rivalled the bad weather and the wrongdoing of the government as a subject for conversation.

The instructions which Palliser received from London as he prepared for the expedition are set down clearly in a letter from the Secretary of State:

From Fort Garry you will start, as soon as you have organized your party, in a westwardly direction, taking such a course as you shall consider most advisable for acquiring additional knowledge of the country . . .

. . . you will endeavour, from the best information you can collect, to ascertain whether one or more practicable passes exist over the Rocky Mountains within the British Territory, and south of that known to exist between Mount Brown and Mount Hooker.

It being the desire of Her Majesty's Government that the Expedition should, as far as practicable, be made available for extending general as well as special scientific knowledge, I have to impress upon you the importance, in addition to maintaining a regular series of instrumental observations, of regularly recording the physical features of the country through which you will pass, noting its principal elevations, the nature of its soil, its capability for agriculture, the quantity and quality of its timber, and any indications of coal or other minerals.

Above all, Palliser was to avoid "all risk of hostile encounters with any native tribes" and keep within "the limits prescribed for the Expedition . . . unless under circumstances of urgent necessity," which he was to report at once.

After a long journey via Lake Superior, the party arrived at Lower Fort Garry on July 11, 1857. The next day was the Sabbath and Palliser, with other members of his party, rode four miles to attend church service.

Additional men were hired. The plight of Sir George Gore who, in the previous year, had been decoyed by Sioux Indians and robbed of horses, arms, ammunition, baggage, clothes, and good temper, was too recent to be forgotten. The danger from attack would be reduced by a bigger party. Wages paid to the men were £40 per year and the horses, of which there were about thirty, were bought at an average price of £20. Two small American wagons and five carts carried the equipment. It was a small show by modern standards, but vastly significant in the story of the West.

The expedition moved out of Fort Garry ten days after Palliser's arrival. The course lay in the direction of Pembina, thence westward along the boundary to Turtle Mountain, and then in a general northwesterly direction. At Fort Ellice, Palliser saw "only a very small patch of ground under

cultivation and potatoes form the chief crop." There he conferred with Mr. Pratt, a full-blooded Cree Indian from Red River, serving as a Church of England missionary. Pratt had been successful in growing a little wheat and Indian corn on his land near the fort. He informed Palliser that the Indians were beginning to comprehend a scarcity of buffalo and that, in his opinion, they would soon be obliged to cultivate some soil. Palliser endorsed the proposal to introduce simple agricultural implements such as spades, hoes, and ploughs, to allow the Indians to become familiar with them.

That Captain Palliser was a "horse trader" as well as a scientist is attested by his record of September 14, 1857, "Mr. Pratt gave us a very fine mare in exchange for two wretched horses, one of which is not likely to live long." Four days later he was again trading, this time with a band of Cree Indians between Moose Jaw Creek and the Elbow. On this occasion there is less evidence of boasting and it may be presumed that the Indians outsmarted him.

For a day's journey westward from Qu'Appelle Lakes the countryside appeared attractive. Then the growth of grass became deficient and there were general "symptoms" of desert country. The party travelled close to the "Creek where the Bones Lie," perhaps Wascana, on the banks of which Regina was later to be built, and touched Moose Jaw Creek. To their satisfaction, the latter afforded wood, water, and grass, and they probably shot game where the Grant Hall Hotel stands today. On the advice of an Indian guide, Nichiwa, the travellers had carried wood all the way from the Qu'Appelle Lakes. It was used along with "buffalo chips" for fuel. Again a supply of wood, enough for five days' travel, was taken with them.

Captain Palliser was now in the heart of the buffalo country and the traditional battle-ground of Crees and Blackfoot, "where none go to hunt for fear of meeting enemies. . . . The whole region as far as the eye could reach was covered with buffalo, in bands varying from hundreds to thousands."

Between Moose Jaw Creek and the Elbow, the party saw more evidence of drought. Here was sage,

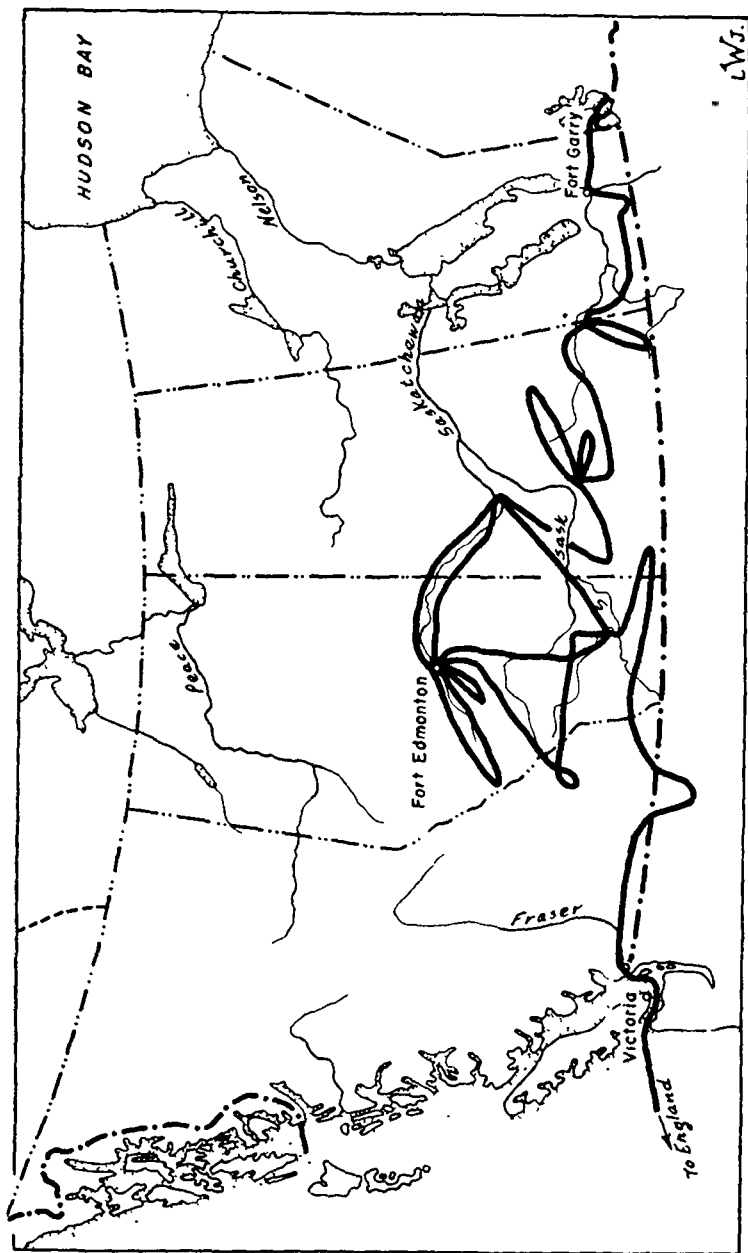
a low shrub characteristic of the great American deserts. Although the country throughout was arid and sterile, still muddy swamps very frequently occur, in which are to be found wild fowl in great abundance. . . . The grass in this arid soil, always so scanty, was now actually swept away by the buffalo, who assisted by the locusts, had left the country as bare as if it had been overrun by fire; even at the edge of Sage Creek we could obtain but very little grass for our horses.

At the Elbow, Palliser dispatched Dr. Hector with one or two men to trace the course of a tributary found flowing from the east into the Saskatchewan. It was found to connect with the most western of the Qu'Appelle Lakes and to be navigable all the way. He recognized immediately and with enthusiasm that this was a "valuable water communication between the South Saskatchewan and the Red River and that a good sized boat" might descend all the way.

Although Palliser had planned to penetrate more deeply into the southwestern prairies from the Elbow, his men soon prevailed upon him not to venture farther into Blackfoot country that season. Changing their course, they crossed the South Saskatchewan and followed a northeasterly course to Carlton, which was to furnish winter quarters.

The captain's journal indicates something of the extent of animal life between the Elbow and Fort Carlton. He was probably close to the site of Saskatoon on September 26, 1857, when he saw a bear which he identified as a grizzly. There were other encounters with bears from time to time, both in the park belt and on the prairies. Palliser was probably aware of the difference between grizzlies and other varieties and there is no reason to doubt that some of the bears seen east of the mountains were genuine grizzlies. Indeed, grizzly skulls have been found on the prairies.

In this region there was ample opportunity for big game hunting and the travellers recorded elk, black tail deer, common deer, and antelope. While hunting in that area, an Indian member of the party demonstrated, quite uninten-



MAIN ROUTE OF PALLISER EXPEDITION

tionally, the art of shooting buffalo with a ramrod. Palliser tells about it on October 1, 1857:

Our Indian (Nichiwa) ran buffalo also that morning, killed a good cow, but complained of having lost his ramrod, went back some distance to look for it, at length he abandoned his search, and returned to cut up his animal, in the body of which he subsequently found the remains of his ramrod. He called to Mr. McKay and said, "I have been looking for my ramrod, and see where it was all the time." He had loaded with the ramrod and forgotten to withdraw it before firing.

On the morning of October 6, Palliser's men began to don their best clothes and smarten themselves up in preparation for their entry to Fort Carlton which, their experience told them, was only a short march distant. Palliser's instruments told a different tale, however, and when the captain argued they were still thirty or forty miles from the fort, laughter arose that anyone who had never been there would dare to offer such determined opinions. "How can you know, when you have never been there?" they questioned, contending that another hour of march would bring them to their winter home. The next morning they were still determined that they could be at the Fort for breakfast and insisted on marching with that in view. They soon discovered their mistake, however, and finding the captain's estimate of the distance to be accurate, "began to entertain very exalted notions as to the powers of the sextant." They reached Fort Carlton on October 8.

After discharging some of his men and seeing that matters generally were in order for wintering, Palliser left three days later, travelling on horseback and bound for Canada. He must have been a tireless rider; he was at Touchwood Hills on October 15, Fort Pelly on October 18, Fort Ellice on October 23, and Red River on November 1. Leaving Fort Garry he rode south, but his horse was killed at Pembina and he was obliged to walk several hundred miles. From St. Paul to Montreal travel was more comfortable and at the latter city he conferred with Sir George Simpson and balanced the accounts for the year.

Before leaving Red River, Palliser hired men for the 1858 season, instructing them to proceed to Carlton on March 10. He hoped for a bigger party for the next year's explorations in view of the proposed incursions into the southwest and the larger camps of ferocious Indians to be encountered there.

Dr. Hector continued his studies through much of the winter and by January was at Fort Edmonton. Here was a well-built post "as large as Fort Garry." The farm at that point was described as the only one on the Saskatchewan and comprised not over thirty acres. A small amount of grain was gristed there but Dr. Hector said that nine-tenths of the flour was brought from Red River or all the way from England. There were one hundred and fifty people in the fort and their average consumption was two buffaloes a day.

Most Canadians will suppose that meat rationing was an invention of the war years around 1943. That would be incorrect. The Fort Edmonton potato crop had been disappointing and when Palliser's people were there, it was considered necessary to ration the visible supplies of meat. But what a ration—six pounds of buffalo meat per person per day.

Dr. Hector's attention was arrested by the prevalence of goitre among the people living immediately east of the Rockies. Indeed, he tabulated details of fifty or more cases. The disorder was most general among the Sarcee Indians and Sullivan, who was Palliser's secretary, adds a bit of unscientific comment, "probably the result of intermarriage with relations." The science of nutrition has made notable headway since that time.

The exploration of the country between the two Saskatchewanans was the major objective in that second season although members of the party hoped also to search for mountain passes. Reporting from Edmonton later in the year, Captain Palliser was able to announce that a pass had been found which, with a little expense, could be made practicable for carts as well as horses; it was wholly within British territory.

Headquarters for the second winter were at Fort Edmonton but the leaders were not idle. In February, Palliser visited Rocky Mountain House in the hope of becoming acquainted with the Blackfoot chiefs in whose country he hoped to explore in the following summer. Meanwhile, Dr. Hector was leading a party to Jasper House, then in the charge of Mr. Moberley. Those winter explorations were not made with horses but generally by snowshoes and dog teams.

Exploration in the third and last year of the undertaking had a late start because servants of the Imperial Government should not act without "orders," even though they were in a remote part of another hemisphere. But Colonial Office orders arrived on June 19 and Dr. Hector carried them to Palliser, who was out around Buffalo Lake hunting for food. Orders were to explore "the remainder of as yet unknown country in the neighbourhood of the boundary line"; permission was also granted to return home via the Columbia River and Vancouver's Island at the end of the season.

The explorers went south, crossing the Red Deer River and the Bow. Much against the advice of the men and of friendly Indians who anticipated trouble from the dangerous red men to the southwest, the captain continued on his course and reached the Cypress Hills on July 28. "These hills," he said, "are a perfect oasis in the desert we have travelled!" Wood, water, and grass make a happy combination always. West of the hills, the country was said to be desolate and without grass or water.

At the beginning of August, Dr. Hector was preparing for his most arduous branch expedition which would take him via the Belly and Bow rivers across the mountains to the forks of the Fraser and Thompson rivers. Meanwhile, Palliser started for Porcupine Hills, which had been touched in the previous year. Then by mid-August, Palliser's party was split; superfluous helpers were sent back to Edmonton to be discharged while the others under Palliser's leadership prepared to go over the mountains and on to the coast. On

January 16, Dr. Hector joined the captain at Victoria, whence both sailed shortly for England, the main part of their charge completed.

Palliser was back in England with a story to tell about Indians and soil and climate. That he had not lost his scalp seems to have surprised Her Majesty's Government more than himself. He had made many contacts with the Indians and felt much concerned about what would happen when the population of whites was ultimately increased. He had been diplomatic in meeting the Indians, especially the much feared Blackfoot, and had gained their confidence.

I always first plainly stated that I had been sent out by Her Majesty for the purpose of examining and mapping the country, and for enquiring into the state of the Indians of the different tribes; that the Queen had sent them no presents because she did not know whether they were good or bad people and I usually stated that the reason for my travelling with so small a party was because I trusted to their honesty and good faith; at the same time explaining to them that in our country we had very large guns which would kill at a long distance, and that in one battle there were often as many killed as their whole tribe numbered. I would add that I was sure Her Majesty would be glad to hear a good report on them, and if they had any messages for Her that I would take it down in writing, in which they had great faith.

It was double-barrelled diplomacy; if flattery wouldn't work, perhaps fear would. Palliser did not anticipate that the Indians along the North Saskatchewan River would create any serious obstacles to settlement of that "fertile belt." Doubtless they would occasionally carry off horses and oxen, and the white man in pursuit would come into mortal combat with them. But, he argued, if examples of practical agriculture and opportunities to obtain agricultural implements were offered to the Thickwood Crees and Mountain Stoneys, they would rapidly commence planting potatoes and other crops. In so doing they would save themselves from much of the labour and hunger which they had to endure throughout the winter in providing meat for large families.

But about the domestication of the Blackfoot, Piegans, and Bloods in the southwest, and agricultural settlement in

that section, Palliser had reservations: "They [the Blackfoot] are the real Bedouins of the prairies. . . . Their only food is the buffalo, and most of them will go a long time hungry rather than eat ducks, rabbits, and any kind of small game." He explained further that they cared little for flour, sugar, and coffee, which they claimed made them sick.

Palliser advised that those portions of the country to be set aside for Indian reserves be at once defined and that efforts be made to teach the Indians agriculture. His faith in the conversion of the savages to agriculturists has been scarcely justified by the record of intervening years, although a good deal of progress can be demonstrated. He advised that provision be made against "buying-out" the Indian property by whites and that rigid liquor laws be enforced. He recommended Indian schools and the immediate establishment of the international boundary across the prairies. The institution of military police was also vital to agricultural development, such a force to be constituted somewhat after the order of the Irish Constabulary and charged with the suppression of the liquor traffic and the preservation of peace and order. He urged further that it would be almost impossible for the Hudson's Bay Company to provide government to meet the exigencies of a growing colony.

What were Palliser's conclusions about the most vital question of all, the future for agriculture in the northwest? He recognized wide variations in soil and climate in the country within his survey and that advice must be predicated upon local conditions. Perhaps the idea is still too common that the three mid-western provinces, sometimes called erroneously "prairie provinces," constitute a continuous area of flat, dry, and treeless country. Nothing could be farther from fact; a wide range of topographical, soil, and climatic conditions exist. About the northern portion or park belt, with which he was probably most familiar, Palliser was optimistic. He called it the "Fertile Belt."

Almost everywhere along the course of the North Saskatchewan are to be found eligible situations for agricultural settlement, a sufficiency of

good soil is everywhere to be found, nor are these advantages merely confined to the neighbourhood of the river; in several districts such as N.W. of Carlton, we traversed fine land fit for all purposes, both of pasture and tillage, extending towards the thickwood hills, and also to be found in the region of the lakes between Fort Pitt and Edmonton. . . .

In almost every direction round Edmonton the land is fine, excepting only the hilly country at the higher level, such as the Beaver Hills. . . .

The country around Fort Ellice and the Touchwood Hills is well adapted for cultivation, and the rearing of cattle; the soil is good, but there is a great scarcity of timber either for fuel or building purposes. . . .

But Palliser held no brief for the open prairie where he observed lack of wood, limited water, and short grass. He thought it unsuitable for cropping; "whenever we struck out on the broad prairie we generally found the soil worthless, except here and there in small swamps."

Palliser's Triangle, the captain believed, represented a continuation of a larger area of semi-desert country south of the international boundary. Its base was along the forty-ninth parallel from longitude 100° to 114° west; the apex of the triangle enclosing this "central desert" reached the fifty-second parallel of latitude and would be close to the present site of Monitor, Alberta.

In mapping the semi-arid area Palliser did well, but the absence of trees, the sparse growth of grass, and shortage of fish produced some strong prejudices in his mind. He admitted that not all prairie land was sterile, because he knew of the immense and productive prairie country in the valley of the Mississippi, extending to Lake Winnipeg and including the fertile valley of the Red River. But he didn't have much good to say about the short grass plains, some sections of which are today growing the world's best wheat.

The prairie soil of Rupert's Land was not all good and it was not all bad. Some of it had abundant fertility, notwithstanding the short grass which grew on it, and Palliser's biggest mistake was in condemning a large area because of low yield of grass. A probability not to be overlooked, however, is that he was in the country during one of the recurring periods of drought and consequently saw the prairies at their worst.

He considered it essential that districts chosen for settlement should provide as many as possible of the necessities of life, thereby contributing to the security of the settlers. Food and fuel were ever in his mind when he was evaluating an area for agriculture. He must have been very fond of fish because the supply which would be available to settlers never escaped his attention. Fishing, said he, would take less of the settler's time than hunting, although a true devotee of the rod considers hours without a single nibble well spent.

Which areas would be settled first? Palliser prophesied that the first new agricultural settlements would be in the regions of fertile soil around Lakes Manitoba and Winnipeg and the upper Assiniboine River. He was guessing pretty well. Then, as immigration increased, settlement would extend to the forks of the Saskatchewan, thence up the north branch to Battle River where there was more tree growth than farther south. Not foreseeing the government sponsored railway development of the eighties, he was influenced in his predictions by water communications and pointed out that in the development he suggested the bordering lakes and rivers would offer facilities for transportation, which was vital. Supplies of lumber could be brought down the Saskatchewan River from the Rocky Mountains for the use of the settlers.

Palliser was fairly cautious; about grain production his statements were guarded. Only by trial and error would the capacity for cereal growing be established. He had seen "first rate specimens of barley and oats," but later ripening wheat had "not been so successful."

In spite of frequent complaints about the inadequacy of the grass for the Palliser horses, the captain had visions of large herds of cattle and sheep grazing on the prairies. He recognized that although the yield was light, the nutritional value was high. "The richness of the natural pasture in many places on the North Saskatchewan and Battle River," said Palliser, "can hardly be exaggerated." Alex Mitchell's purebred Herefords of recent years would agree. And "the only objection

to raising sheep and pigs would arise from the number of their natural enemies, the wolves, which roam everywhere through the wood and plain. . . .”

The best summary is from Palliser's own pen:

The territory which has now been examined and mapped by this expedition ranges from Lake Superior to the eastern shore of the lesser Okanagan Lake, and from the boundary line to the watershed of the Arctic Ocean.

This large belt of country embraces districts, some of which are valuable for the purposes of the agriculturists, while others will for ever be comparatively useless.

Palliser soon had competition in his quest for the truth about Rupert's Land. Henry Youle Hind, a professor of chemistry and geology at Trinity College, Toronto, was sent west by the Canadian government in the same year as Palliser. The Hind expedition was less extensive and the present boundary between Saskatchewan and Alberta might be regarded as approximately the western limit of his reconnaissance. In 1858 Hind followed the Qu'Appelle Valley westward to the South Saskatchewan and became most enthusiastic about damming the big river and diverting the flow into what he considered might have been the original channel, the Qu'Appelle, thus facilitating a short water route across the prairies from the Bow River to Fort Garry. He considered a dam eighty-five feet high would be sufficient to change the course completely.

Hind's report about the agricultural resources of the prairies was more favourable than Palliser's, and the Canadian provinces were inclined to accept the judgment of their own representative, particularly because it coincided with their own hopes and needs. Archbishop Taché, on the other hand, published in 1868 a pamphlet in which he contended that much of the prairie section was not fertile. Perhaps he sensed danger to the little flock of Métis in the growth of settlement. Thereafter it was repeated occasionally in the east that the desert conditions which extended into Rupert's Land made the prairie country a net liability. There was much argument, but

eventually it was arranged that Canada should take over most of the Hudson's Bay Company territory. This was one of the first transactions of the new federal government, and ever since the problem of the development of the West has been a vital factor in policy formation.

In 1872, soon after the purchase, John Macoun, professor of botany and geology in Albert College, Belleville, and later assistant director of the Geological Survey of Canada, went to the West. He was with the Sanford Fleming survey party which travelled through the park belt from Winnipeg to Edmonton, touching Portage la Prairie, Fort Ellice, Touchwood Hills, Fort Carlton, and Fort Pitt. From Edmonton, Macoun went into the Peace River country. His book, *Manitoba and the Great North-West*, published in 1882, was high in praise for the agricultural resources of the West. He took issue with Palliser about the fertility of the plains, criticizing the latter's judgment of the soil entirely from the vegetation growing thereon. He suggested, too, that Palliser had been influenced by the American people who at that time were condemning the central part of the United States, from the hundredth meridian to California, calling it "The Great American Desert." Macoun wrote:

It is now known that the prairie lands are better suited for immediate settlement, and less subject to summer frosts, which prove so injurious to late sown grain on the more elevated and moister sections of the country.

Macoun conducted a rough soil survey as the following statement written at Edmonton will indicate:

We are now 890 miles by cart trail northwest from Winnipeg, and over this immense distance pits, four feet deep and twenty miles apart, have been dug, and a careful examination of the soils shows that only about five per cent. of the whole distance is unfit for agriculture and classed as third class soils, when compared with those of Prince Edward County which is one of the most productive districts of Ontario.

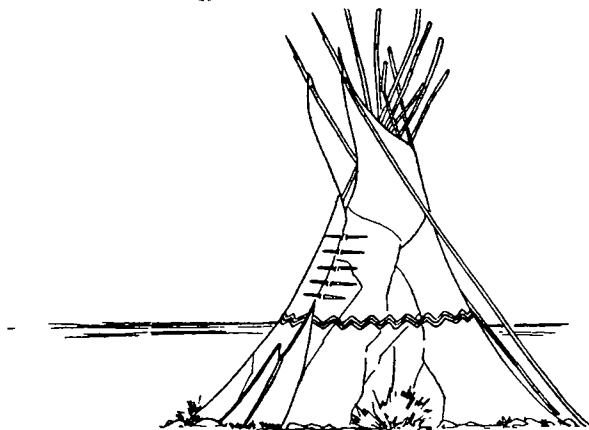
If Palliser had been guilty of underestimating the prairie country, Macoun may have overestimated. But optimism is admirable and as the following will show, Macoun possessed

a brand of enthusiasm which would have filled Saskatoon real estate men of a later period with envy. Such an attribute would have made it easier to sell as "Saskatoon City Property" lots located at Warman, a dozen miles and more away from the subdivision.

Much might be written about the future and calculations made regarding the wheat production of years to come, but such speculations are needless. In a very few years the crop will be limited by the means of export, and just as the carrying capacity of the roads increases, so will the crop. No sane man can doubt this, for a glance at the map will tell him that there is actually no limit, but the want of a market, to the wheat crop of the North-West. When the rulers of England awake, as soon they must, to the fact that within the Dominion of Canada exist today, as virgin soil, three-fourths of the wheat lands of North America, and that it is to her they must look for their future supplies of food, whether it be beef or flour, we will receive that amount of attention and consideration which, as England's greatest colony, we deserve. What we want is men and money, and both these a judiciously framed emigrant policy on the part of Great Britain would give us.

However wide of the mark some of Macoun's superlatives may have been, he was at least nearer the truth than those who argued that the West had no future as an agricultural region.

3 *Retreating Frontiers*



WHEN the Palliser Expedition crossed the prairies nearly half a century after the arrival of the first Red River settlers, its members found the country still mostly virgin wilderness. West of the Red, Captain Thomas Blakiston, who was attached to the expedition, reported "a small collection of homesteads" at "The Portage," but the homesteaders must have been halfbreeds, for the first white settler in the district, the redoubtable John McLean of Perthshire, did not arrive until 1862. From this point one would travel clear to Fort Edmonton without seeing any other reasonable approach to agriculture. At Fort Edmonton the post had a dairy farm, including a domesticated buffalo heifer, to help provide food for the traders! Sir George Simpson in 1841 reported good pasture there. Father Lacombe had tried to encourage farming and Palliser found "tolerable wheat," but there was as yet no flour-mill between the Red and the Rockies, and there was not to be one for another five or six years.

In comparison with The Portage and Fort Edmonton, Red River had a thriving settlement, but it could hardly be called the nucleus of an agricultural industry. It consisted of a

chain of small farms extending for 30 miles along the Red River and 20 miles along the Assiniboine. A few church spires and windmills broke the skyline, but two Hudson's Bay Company forts, one at the confluence of the rivers and the other downstream on the Red, were the centres of community affairs, and over half the population were buffalo hunters, voyageurs, and company servants. Between the census of 1849 and the visit of Palliser's party a decade later, the population had increased from 5,391 to 6,500; cattle from 6,014 to 9,600; and pigs from 1,565 to 5,000; although sheep had declined in numbers, perhaps because of the innumerable dogs. The cultivated acreage had been extended 35 per cent., but there was still less than an acre and a half per person, and people still depended to a considerable extent upon wild meat. Rev. John McDougall, writing in 1864, gives a picture in *Saddle, Sled and Snowshoe* which, by and large, was as true for the Red River settlement as for his own outpost mission right up to the time of Confederation:

Our garden this year had given us a nice quantity of potatoes, and we have some barley, but meat will be our chief food. As we have no mill, the only way we can prepare barley is to soak it, and when partially dry, pound it in a wooden mortar to loosen the chaff and husks, and then winnow this. We boil the barley in soup, or else parch it and grind it in our small coffee-mill, and make cake of the meal obtained, all of which is slow and tedious work. So long as we can get buffalo within three hundred miles we would prefer buffalo-steaks to barley-meal.

Of course, there were some enterprising agriculturists among the Red River settlers. Captain Blakiston saw pumpkins and melons in some gardens, and a number of "intelligent individuals" had formed an Agricultural Association which had among its objectives the stall-feeding of cattle for slaughter. Alexander Ross was a great believer in livestock breeding, but pointed out that for want of care the cattle were deteriorating notwithstanding the importation of costly bulls from England and the United States. "The local government," said he, "has taken no steps to restrain a multitude of dwarfy bulls from running at large in all seasons to the injury of the

breed." Neither the problem, the ambition, nor the disposition of scrub bulls has changed much in a hundred years.

Ross thought horse breeding equally important, since horses, "the only staple article in the colony, always met with a ready market and good price," and as long as buffalo-hunting continued, "must always be in request."

Blakiston noted that livestock pastured at the back of the cultivated land during the summer and, while the grazing was good, the mosquitoes, bulldog flies, and other parasites were troublesome. The biggest problem of all was hay for the long winters; he writes of five loads per ox or 10 loads per horse, but either the cattle and horses of that time had pathological appetites or the loads were hauled on democrats instead of hayracks of the modern kind.

The best oxen in the colony, said Ross, could be bought at £6 per head and cows at £4.

Pork is not raised to any extent. . . . Sheep are declining fast in number from the ravages of the dogs and wolves. . . . Pork and mutton sell at 2½d. per pound; beef, 2d.; butter, 7d.; cheese, 5d.; and eggs, 6d. per dozen. . . . The price of wheat is 3s. 6d. and barley 2s. per bushel. . . . No article of produce is exported, consequently no provisions are salted but what people require for their own use. Each farmer raises grain and cattle enough for his own establishment, and no more; but the generality of them, with the exception of the Scotch, fall more frequently below, than rise above this standard.

In short, farming was still on a subsistence rather than on a commercial level. Beyond sizeable shipments of furs, a limited movement of horses to the south, and the sale of small amounts of flour, hams, butter, and cheese to the trading posts, exports from the colony were of little account. This lack of outside markets did more to retard progress than the most discouraging losses from floods, early frosts, and recurring plagues of grasshoppers.

Many of the people were satisfied to accept this subsistence level. Farming was a sideline for them as it was around the Hudson's Bay Company forts. The English-speaking settlers on the west bank of the Red from the upper Fort to a few miles below the Lower Fort were mostly bona fide farmers,

but the French and French halfbreeds who occupied the north bank of the Assiniboine and both banks of the Red above the forks, and the Indians of the settlement downstream below the English-speaking community, were legacies from the fur-traders' empire and clung to the past. They loved their semi-nomadic life, and they would not be weaned away from it without bloodshed as long as the buffalo roamed the plains where the Great Spirit had placed them for the subsistence of his children.

Indians seemed to acquire the white man's faults more readily than his virtues. At an early date they redomesticated and propagated wild horses bred from the bands let loose in North America by the early Spanish explorers, but they used them chiefly in war and in the hunt. Furthermore, horse stealing, which began as a necessity, soon became a tribal pastime: there was almost as much glory in stealing a horse as in lifting a scalp. Similarly, although the Indian long continued to use his bow and arrows for hunting, because their use permitted a large slaughter before the buffalo herd took fright, he immediately recognized the military value of the white man's firearms, and too often directed them against the race from which he had obtained them. Most demoralizing of all, however, were the white man's diseases and the white man's alcohol.

Severe outbreaks of smallpox, "the white man's plague," decimated the Indians of scattered tribes in the West in 1781, 1820, 1838, 1862, and 1870. In 1869, from a boat on the Mississippi between Fort Benton and St. Louis the disease spread among the prairie tribes on the American side of the boundary, and was brought north, apparently by a plundering Cree war-party which had ravaged a camp of dead. Father Lacombe, who was among the Indians at that time, estimated 2,500 deaths among the Crees and a correspondingly heavy toll in the ranks of the Blackfoot.

It was said that the missionaries and the whisky traders arrived together. Whisky and rum were important items of exchange at certain periods in trading years, especially among

the more irresponsible free traders. The Indians developed an intense craving for intoxicants and would part with any possession, furs, guns, horses, and even their squaws, in order to get the stuff. By the middle of the nineteenth century American free traders were rapidly demoralizing the Indians, rendering them useless and dangerous through alcohol. As in modern times, it was profitable to dilute a beverage and there was added reason here in that human life would be safer if the Indians were drinking a watered-down intoxicant. For the Blackfoot, most ferocious of the Indians, whether drunk or sober, the special dilution was one of rum to seven of water; it was known as Blackfoot rum. For the Crees and Assiniboinés it was "one to six" and for the Saulteaux, "one to five." In any case the cumulative effect was ruinous. In spite of the efforts of such friendly and wise chiefs as the Saulteaux, Peguis, to whose memory a statue was erected in Kildonan Park, Winnipeg, the breach widened between Indians and half-breeds on the one hand and white men on the other.

In this state of disorder, Hudson's Bay Company rule was obviously inadequate. Local administration was in the hands of a Governor appointed by the Company, assisted by a council of influential residents who likewise held Company commissions. But there were no elections and no taxes. Such bridge construction and road building as were undertaken were financed to a large extent by fines. When more money was needed for public works, either the police combed the settlement more thoroughly to find the necessary criminals or the regular fine levies had to be increased. Within the settlement there was some degree of law enforcement and trial by jury was recognized, but order on the open plains depended on the influence of the occasional trader or missionary and on the code of the individual or band. Obviously, this was not a situation to encourage settlement.

Nevertheless settlement continued to spread, albeit slowly. In the middle sixties Rev. James Nisbet led a party of settlers across the prairies and, at the end of a 60-day journey, halted

on the North Saskatchewan to found an agricultural colony which was later named Prince Albert. The community at Portage la Prairie by this time numbered some dozen settlers, squatting on unsurveyed land; bearing in mind the dictum that a successful Caledonian Society should have not fewer than two members, they had formed the first unit west of Fort Garry.

How loose the administration of this territory had become in the period immediately preceding the transfer of power from the Hudson's Bay Company to the newly formed Dominion of Canada is evidenced by the novel conduct of one Thomas Spence who set up a "Republican Monarchy" at Portage in 1866 with himself as president and one Findlay Ray as secretary. This affair never went much beyond the proclamation stage, though a council was appointed and an oath of allegiance administered to all who would take it willingly. The first public buildings were to be a courthouse and a jail. To secure revenue, a customs tariff on all incoming goods was to be collected. But it appears that the main charge upon the public treasury was for whisky for Spence and his council. Government financing wasn't complicated by borrowing at that time because there was no place from which to borrow, and Spence had no difficulty in balancing liquid assets against revenue.

A shoemaker by the name of McPherson, who made scurrilous and unpatriotic remarks regarding the new regime, was charged with treason. After a tussle, two constables apprehended him and brought him to trial at Portage la Prairie. John McLean went along to see that his fellow Scot got justice and when the trial began, McLean addressed Spence, "Come oot o' that ye whited sepulchre, ye canna act as judge and accuser baith." The language was scarcely becoming to the high court of a republic but McLean had some stout supporters in the court and in the fight which followed, McPherson got his freedom, the court was cleared, and the back of the unconstitutional government was broken.

The Indians and halfbreeds of the Red River settlement could see nothing good about the transfer of the West from Hudson's Bay Company rule to that of distant Canada. It meant not only the disappearance of the way of life they loved but submergence in a group they regarded with suspicion and fear. This threat had been developing since 1859 when two Canadians from Upper Canada began the first newspaper in Red River, the *Nor' Wester*. By their swashbuckling manner they had alienated and alarmed the older settlers, and created a prejudice against all things Canadian. This was aggravated by the foolish boasts of the Canadian surveyors sent to lay out the Dawson road just prior to the taking over of the Territories. Not only did these men ignore the Métis property lines, they even suggested that the halfbreeds might lose their lands altogether.

Perhaps it was no wonder that Louis Riel and his disgruntled followers set up a provisional government in 1869. William McDougall, the newly appointed lieutenant-governor, was already on his way to the Red River by the United States route. A band of armed Métis met him at the border and convinced him it would be healthier for him to remain outside the country. That Riel had much local support, no one could doubt. He made some serious blunders, and a fatal one in shooting Thomas Scott, a quarrelsome Orangeman from Ontario. The issue was obscured by racial and religious distrust; and the end of the provisional government was marked by Riel's flight, well-timed to coincide with the arrival of a military force from the East.

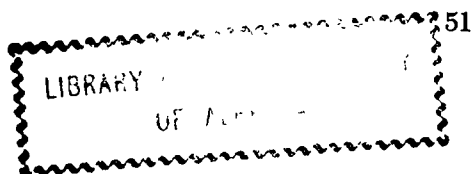
Although the land survey had caused trouble, it had been essential. The original Red River survey followed the old Quebec system with long, narrow farms running back from the river. The river lots laid out along the Red shortly after the arrival of the Selkirk settlers were 160 chains deep and 8 chains on the river front, containing 128 acres. With settlement limited to land along the stream, this manner of survey was logical. The river became the highway and the river bank

was a residential avenue. Householders were just far enough apart that kitchen odours didn't betray mealtime secrets, but close enough that everything which hung on neighbourly clotheslines was public information.

The township plan of survey was adopted in 1871. The halfbreed population was opposed to it but the newcomers, who had no prejudices, fancied the principle of square farms. Townships would be six miles square and comprise 36 square sections of 640 acres per section. The International Boundary Commission established the boundary at latitude 49° and principal meridian lines were extended northward. Tiers of townships were numbered from the base line northward and ranges of townships were numbered from one meridian westward to the next. Time confirmed the appropriateness of the system.

Those who went West ahead of the homestead legislation simply "squatted" on land of their choice and hoped their claims would never be disputed. For example, when Miss Mary Ramsay who became the wife of Archibald Wright, Winnipeg pioneer, travelled overland from Fort Garry to Fort Carlton in 1868, she saw no cultivated land; but on the return trip in the next year she saw fresh breaking on Kenneth McKenzie's new farm at Burnside, just west of Portage la Prairie. Guided to the land on which he settled by John McLean, with the aid of a pocket compass McKenzie had laid out a farm of 1,800 acres on both sides of Rat Creek and ploughed a furrow around it to clinch his claim.

McKenzie's arrival in the Portage district was a landmark, for he became the most distinguished farmer in Manitoba. The Shorthorn bull he brought with him was the first in the Northwest. The log school he erected beside Rat Creek in 1877 was the first west of Portage la Prairie. When his son Adam, the biggest farm operator of his time, ploughed a furrow around the land he was claiming, it may have been the longest furrow ever cut on the earth's crust. In the same year in which McKenzie settled at Portage, Dan Shea located



northward, the first to settle on the shores of Lake Manitoba.

The Land Act, providing for homesteading in the Northwest, came in 1872. It was a spark which set the prairies afire. The head of a family or any person 21 years of age or over could make entry for a quarter-section farm on even-numbered sections. The fee was ten dollars and title could be obtained after three years provided proof was furnished of occupancy and certain specified improvements. A homesteader might add to his holding by pre-empting or buying another quarter-section of Crown land at a price about \$2.00 or \$2.50 per acre.

Leading the homestead parade was John Sanderson, who arrived at Fort Garry on the first day of July, 1872. He had made a long and tedious journey from his home in Scotland. From Collingwood, Ontario, he travelled to Duluth by lake boat, then to Moorhead by train, to Frog Point by wagon, and to Fort Garry by river boat. When the door of the land office opened on the morning after his arrival, Sanderson was waiting to step inside. He filed on a homestead (N.E.35-12-7), paid his ten dollars, and then wondered how he would find his farm. The squatters who had gone westward ahead of him had not considered themselves limited to any particular piece of land and had no worries about section marks.

Sanderson bought a pair of oxen and drove west on the trail which was to become Manitoba's Highway Number One and, after much searching, found the iron stakes which identified the first homestead in the West. It was on Portage plains—good land—and Sanderson was there to stay. In the territory west of the Manitoba boundary, the first homestead patent was granted to Thomas Cavanaugh (E-24-20-13-W2) whose farm was not far from Fort Qu'Appelle. Cavanaugh's log house was still standing, a symbol of pioneer solidarity, seventy years later.

Developments were inviting the attention of settlers but still there was no rush because there were a hundred million acres to choose from. Apart from the Selkirk settlers, quite a high percentage of those who selected land had heretofore

represented a backwash from fur trading, whisky smuggling, and gold mining. But that was changing and many of the newcomers were from the eastern provinces. They were prepared to venture farther back in Manitoba to locate what they favoured in land, and the boldest of them went as far as the Gladstone district, nearly 50 miles beyond Portage la Prairie.

The settler fancied a location beside a river, of course, but a good trail was acceptable as a reasonable substitute. Any land seeker who ventured far from a main trail or a stream was certain to become lost. Being lost in such a big country was not pleasant, but as long as the "grub-box" was stocked the experience was not considered serious because, until land was located, home was where the wagon or cart stopped for the night. Halfbreed guides could be employed but most settlers elected to dispense with such luxuries. By the end of October 1874 there were 1,376 homestead entries in the West, but half of these were subsequently cancelled.

More important in this development than the work of solitary homesteaders were the group settlements for which a pattern had been set in old Red River days. A number of groups settled on the prairies in the seventies and early eighties, among them, in addition to emigrants from the Motherland, the older settled parts of Canada, and the United States, some interesting ethnic minorities which have contributed distinctive and valuable threads to the western pattern.

The Mennonites broke an agricultural trail into prairie country. Except for those individuals who selected land on the Portage plains in the sixties, the early settlers avoided the prairies. The treed regions were considered more fertile and they afforded fuel and shelter from wintry winds. But the Mennonites who came in 1874, 1875, and 1876, and who knew something of prairie farming in Russia, set a new pattern in settlement. They chose the open country. Fifteen hundred came in the first year, 3,500 in the next, and 1,500 in the third year. A few went east of the Red River but most of them

settled on 17 townships on the prairies between Red River and Pembina mountain.

At first the Mennonites lived in communal villages and at one time there were 60 such villages on the west side of the Red. The principle of isolation which went with communal colonies was not good. To immigrants in a strange land there were obvious advantages in banding together closely, but it retarded assimilation. In the case of the Mennonites in Manitoba, however, the communal system was breaking down at the beginning of the century and individual ownership of land was becoming the rule.

Here were peace-loving, hard-working, and devoted people. They held that many governmental and social institutions were based upon unchristian principles. In coming to Canada they sought religious freedom and the promise of exemption from military service. From the settlement in southern Manitoba and also from the United States and European countries, Mennonites migrated to form colonies in Saskatchewan. A large number settled north of Saskatoon, in the districts between Hague and Rosthern, and some hundreds settled south of Swift Current. Never especially good stock men, they were most successful grain farmers and excellent gardeners. Some became unhappy about life in Canada, however, and about five thousand migrated to Mexico in the nineteen-twenties, and another big group elected to begin again in South America in 1948 (a venture of which very painful reports were heard). But the Mennonites, more than any other group of settlers in Western Canada, have remained on the land, and representatives of the third and fourth generations may be found on Manitoba farms.

Among the distinctive groups to come in the seventies were the Icelanders. A party of 285 arrived at Winnipeg in October, 1875, and settled in the Gimli district along the west side of Lake Winnipeg. Wood, fish, a water route to Winnipeg, and plenty of land at their backs were the features most

attractive to them. From this stock came Vilhjalmur Stefansson, noted Arctic explorer, scientist, and author. Icelandic settlements sprang up at various points across the West but Manitoba retained the largest number of Icelandic people outside of the native island. It proved to be Western Canada's great good fortune to acquire so many citizens of this stock. Among other distinguished citizens of Icelandic stock are Judge J. T. Thorson, Laura Goodman Salverson, Mr. Justice H. A. Bergman, Dean T. Thorvaldson, Olaf Olafson, and Professor Skuli Johnson.

Although the so-called Red River rebellion had petered out and the Land Act had opened the way for peaceful settlement, the Canadian government still faced the gigantic task of bringing order to an expanse of country already famous for lawlessness. The Indians were not yet settled on reserves and there was still unrest among both Indians and halfbreeds. It was clear that agriculture could not flourish until law and order were established. The incoming land-seekers, with justification, demanded reasonable assurance of peace and security; a country with many disgruntled Indians and halfbreeds could not have much appeal for homebuilders. To those already settled on homesteads, the prospect of a bloody showdown was a constant horror.

The settlers breathed more easily as one by one the major Indian treaties were written. Treaty Number One was signed amid pomp and feasting and a few fresh dog skins at Lower Fort Garry in 1871. Six years later, Blackfoot Treaty Number Seven, the last of the prairie treaties, was signed at Blackfoot Crossing on the Bow River. But treaties do not ensure peace, as the world has learned, and the police job was undiminished.

Harsh treatment had been meted out to the Indians, and they knew it. They lost more than they gained. They lost a free life and they lost their land. The new life was foreign and could never be their choice. The white man's greed for real estate, his guns, his laws, his whisky, and his missionaries only confused the Indian mind.

In addition to disgruntled Indians and halfbreeds, the Canadian government inherited the problem of a ruthless whisky traffic. Firewater was carted in from south of the line by notorious traders, most of whom recognized no law and no moral responsibility. By Confederation year they were so numerous as to dominate a big section of prairie country.

Whisky demoralized the Indians and crime soared. No fewer than 88 Blackfeet were murdered in drunken brawls by their own people in 1871. Not all the crimes of the sixties and seventies were committed by drunken Indians, however. Some of the most disgraceful were perpetrated by the whisky traders themselves. Probably the most shameful act of lawlessness occurred in the Cypress Hills in 1873. A group of American traders, who had obtained the Indians' robes and furs in exchange for whisky and other articles, fell upon the drunken natives with the idea of recovering the trade goods. Some thirty men, women, and children were massacred.

If crime had a national capital in those years, Fort Whoop-Up, at the junction of the Belly and St. Mary rivers, would have had the best claim. It was built by traders from Fort Benton, the lawless, prosperous Montana town which served as a feeder to posts on the Canadian side. Forts Kipp, Spitzee, Stand-Off, and Slide-Out were only slightly less sinful than Whoop-Up.

One of the first acts of the Governor of the newly formed Province of Manitoba and the Northwest Territories was to commission William Francis Butler to investigate conditions in the Saskatchewan basin. This young Irishman, who came west with the Wolseley expedition, was to consider, "what may be necessary . . . in the interests of peace and order." In his report, for which the Governor did not have long to wait, he stated:

As matters at present rest, the region of the Saskatchewan is without law, order or security for life or property; robbery and murder for years have gone unpunished; Indian massacres are unchecked, even in

close vicinity of Hudson's Bay Company's posts, and all civil and legal institutions are entirely unknown.

The report recommended the appointment of civil magistrates and the organization of a well-equipped police force of from 100 to 150 men, one-third to be mounted.

Colonel Robertson Ross was given a similar assignment in 1872 and he, too, reported a serious degree of lawlessness. White settlers, according to Ross, were at the mercy of the Indians and hardly dared to cultivate land or introduce livestock into the country. He urged the immediate formation of a mounted constabulary for law enforcement.

Reports of massacres filtered through to the East and awakened public opinion. In 1873 an act of parliament provided for the North West Mounted Police (later the "Royal" North West Mounted Police, and now the Royal Canadian Mounted Police), and recruiting began at once. The term of service was to be three years and recruits in order to qualify had to be "of sound constitution, able to ride, active and able-bodied, of good character and between the ages of eighteen and forty and able to read and write in French or English." A constable's pay did not exceed one dollar a day but upon the completion of service with honourable discharge, he was entitled to a free grant of land, not exceeding 160 acres. Before the expiration of that year, about 100 men travelled by the Dawson route to Red River where another halfbreed uprising was feared. On June 6, 1874, three divisions comprising 16 officers, 201 men, and 244 horses, left Toronto to join their colleagues by way of the United States.

The prairie country had seen Indian war parties, buffalo hunts, bull trains, and cart brigades, but never a cavalcade such as set out from Fort Dufferin, close to the site of Emerson, Manitoba, in the late summer. Officers and men numbered 274. There were 114 Red River carts, 73 wagons, 142 work oxen, 93 other cattle for meat and breeding purposes, 310 saddle horses, supplies, camping equipment, agricultural

implements, and two cannons. The column was several miles long.

Not all the horses and cattle reached their destination. The long journey produced hardship and loss. Over much of the territory the sloughs were dry and both men and animals suffered from shortage of water. Sometimes they had to drink salty water; sometimes a liquid which, after being filtered, was "still the colour of ink."

After three weeks of travel, when the party had reached the site of Estevan, Inspector W. D. Jarvis, with part of A Troop and 55 of the weakest horses, branched off for Fort Edmonton. The main body plodded westward until September 21, when Commissioner French with D and E Troops and the strongest horses and oxen began to retrace the journey eastward from the Cypress Hills.

The illustrious halfbreed interpreter and guide, Jerry Potts, who combined many of the best instincts of a fox and a homing pigeon, directed Colonel Macleod, in charge of the vanguard force, to a spot on Old Man River. Here headquarters were set up at Fort Macleod, the first Mounted Police outpost in the West, one day to be the centre and capital of a mighty cattle kingdom. In due course other posts were established, at Fort Walsh, Fort Saskatchewan, Calgary (originally Fort Brisebois), Battleford, Qu'Appelle, Swan River, and Shoal Lake.

Although the police encountered many obstacles in establishing their authority on the prairies, they gradually won the confidence of the Indians and the fearful respect of those whose practices ran counter to decency. They established conditions under which settlement was possible and were themselves a force in prairie agriculture almost as potent as they were in the suppression of the whisky trade. They created an immediate local market for agricultural commodities. And by the introduction of farming implements and the establishment of a police farm, they demonstrated what might be accomplished by tilling that soil within sight

of the mountains. The Commissioner's report for 1879, for example, showed that the Fort Macleod staff had raised 2,300 bushels of oats and 325 tons of hay on the police farm about thirty miles from Fort Macleod. Fifty acres of oats were planted on the police farm at Livingstone in 1876, but grasshoppers made off with that crop. Finally, a number of retired men gave outstanding leadership in the Western communities in which they settled.

The agricultural people who were to benefit most by the presence of the police were the livestock owners. Cattle killing, rustling, and horse stealing resulted in losses from time to time but these would have been much more prevalent had it not been for the police. Stealing of livestock seemed to flare up periodically, and nobody's horses and cattle were safe.

Even the Mounted Police horses were stolen. Once the main band of police horses was being herded six miles from Fort Macleod, where they were certainly considered to be in no danger. No special notice was taken of some soft-spoken American visitors who appeared in the town. At a later date they would probably have been classified as tourists. But one morning the pleasant visitors were gone and so were the police horses, even the herders' saddle horses which had been hobbled close to camp. Eventually the leader of the thieves got a jail sentence and the Mounted Police recovered their horses, but for a while, with almost the whole force on foot, the situation was delicate.

Stolen horses were nearly always driven south and across the international boundary, although sometimes the process was reversed. They lost no time on their way. Any that became exhausted were left as unworthy of a good thief's time. Cattle rustling came later, after the establishment of the big ranches, and the work of the Mounted Police became even more essential.

In the years during which the Mounted Police were setting up their forts and establishing their reputation for justice, determination, and cold courage, thus paving the way for

settlement, the disappearance of the buffalo was pronouncing the doom of the hunting and fur-trading economy. It was to the buffalo that the aborigines of the central West looked for food, clothing, shelter, and even fuel. It is not always realized what a large part the animal also played in the lives of the white settlers.

The Red River buffalo hunt very early became a great annual outing. In the year 1820, the Red River carts that went out on the hunt numbered 540, and in the year 1840, they were 1,210. The total kill by Red River settlers between those years was estimated by Henry Hind at not less than 652,000. Father Lacombe accompanied the hunt in 1850 and related that over a thousand men, women, and children, hundreds of ponies and cart horses, innumerable dogs, and nearly a thousand carts made the trip. About 800 buffalo were taken on that occasion.

The hunt had an elaborate organization with elected captains and strict rules, such as the following:

1. No buffalo to be run on the Sabbath day.
2. No party to fork off, lag behind, or go before without permission.
3. No person or party to run buffalo before the general order.
4. Every captain with his men, in turn, to patrol the camp and keep guard.
5. For the first trespass against these laws, the offender to have his saddle and bridle cut up.
6. For the second offence, the coat to be taken off the offender's back, and be cut up.
7. For the third offence, the offender to be flogged.
8. Any person convicted of theft even to the value of a sinew, to be brought to the middle of the camp, and the crier to call out his or her name three times, adding the word "Thief" at each time.

All members of the camp turned out to help skin and dress the slaughtered animals. Then, while the gallant gentlemen recounted their triumphs, the women turned without ceremony to the less glamorous work of drying meat, processing fat, and curing hides. This was the Red River buffalo hunt and there was nothing quite like it.

The movements of the herds varied, and at times buffalo meat was hard to come by. The settlers knew the unpredictability of the animals, and knew the necessity of stocking up with food when the herds were within range. Nobody is sure about the main migratory movements except that the animals travelled over a large area and wintered where grass and climate, presumably, suited their fancies.

E. H. Maunsell, who was a member of the original detachment of Mounted Police at Fort Macleod and later a prominent rancher, told of the buffalo seen on the initial western trek. The force camped on Milk River ridge on September 22, 1874, while a storm was in progress. Next morning buffalo were on every side as far as the eye could see. Colonel Macleod and Captain Walker estimated that from one point on the ridge about one million head were within the range of vision. The great numbers that roamed the plains made the rapid disappearance of the buffalo the more remarkable. Final annihilation began about 1875 and by 1881 only a few straggling bands remained. According to James Morrow, the last of the prairie herd was killed by Blackfoot Indians near the Elbow on the Saskatchewan River in 1887.

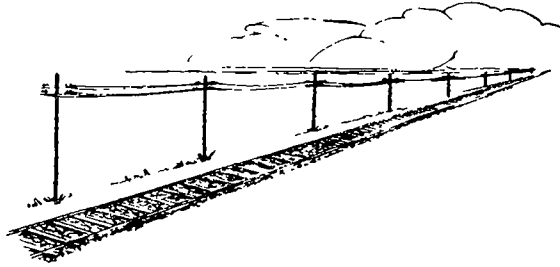
The disappearance of these vast herds is often attributed to the effects of disease, disaster, and natural enemies, but chiefly to the reckless slaughter by both the natives and the white "hide-hunters."¹ The United States Government apparently encouraged the destruction of the buffalo in the hope that once they were destroyed the Indians could be induced to abandon their migratory way of life and settle down to farming on reserves. Systematic slaughter began soon after the close of the Civil War. By 1880 the southern herd was annihilated and by 1884 the same shameful fate had overtaken the northern herd within United States territory. In Canada, however, the first Council of the Northwest Territories was invited to consider what steps ought to be

¹Frank G. Roe's recent *The North American Buffalo* makes a comprehensive examination of all the factors involved.

taken to prevent the buffalo from wanton destruction, and an ordinance for their protection was passed with little delay, but it came too late to be very helpful.

Whether from ruthless slaughter, disease, parasites, or some other cause unknown, the wild prairie buffalo herd disappeared and the whitened bones that mottled the grass country provided many of the settlers with their first harvest. Thus in their death these useful animals not only put a final period to the fur-trading economy of which they had been the mainstay but helped to establish the agricultural settlement which was to succeed it. The way was now open for agricultural settlers; there remained chiefly the problem of enabling them to market their crops.

4 *A Trail of Steel*



MANY famous trails and portages are encountered in the history of the Canadian West, but the trail that brought in the first big influx of settlers and took their crops out to market was composed of two long shining threads of steel. Even after law and order were in a fair way to be established, with the disappearance of the buffalo driving the Indians into the reserves and the Mounted Police putting the fear of God and a red coat into white and red lawbreakers alike, an agricultural industry as such could not arise on the prairies until markets were somehow rendered more accessible. To do this was the task of the railways.

In the early days the canoe had been the chief means of transportation over long distances. It had been devised by the Indians, who, with the probable exception of the Blackfoot, were proficient in its use, and the early whites were quick to adopt this easy method of travel. Even after horses became common among the Indian tribes, they were little used for packing goods, and trading posts and squatters' villages were usually set upon river highways. Canoes were of many sizes, the smaller Indian canoe, the big Montreal canoe requiring sixteen men at the paddles which was used as far west at

Fort William, and the intermediate size known as the North canoe. The latter, with eight voyageurs, could carry a ton of freight, and it was this type that conveyed Governor George Simpson, in his top hat, on many of his western journeys.

York boats for heavy freighting were introduced by the Hudson's Bay Company. These roughly resembled an ancient Norse galley and were manned by a bowsman, a steersman, and about ten oarsmen. Such a boat might be twenty-eight feet long, six feet wide, and six feet deep, and carry a cargo of two tons or more.

The next step in the development of transportation was the Red River cart. The Indians, living in a primitive stone age culture, had never discovered the use of the wheel but used "drags" for transporting goods overland. This new two-wheeled, creaking monstrosity was the white man's contribution. It was all-western in origin and character, although resembling the carts of old Quebec. The original Red River carts were made in 1802 at Pembina, close to the American border, and were used by the North West Company. They were unique in being constructed entirely without metal. Tires consisted of strips of green buffalo hide stretched and fastened about the wheels. When dried, these buckskin tires proved tough and durable. The wheels were easily removed and along with the basket part of the cart could be floated across a river or used to raft supplies across. Each cart was equipped with shafts and hauled by a single ox. The first mechanical industry in the Canadian West was the manufacture of Red River carts at White Horse Plains, just a few miles west of Fort Garry.

"Cart trains," operating between Fort Garry and St. Paul in connection with the fur trade, were inaugurated about 1845. Norman W. Kittson, a native of Quebec and resident of St. Paul, is credited with having originated the "trains" and the same pioneer became a magnate in other forms of transportation. Graduating from cart trains, he turned his

attention to stage coaches, then to steamboats, and ultimately to railroads.

A cart train might be very long. The biggest on record went over the north-south trail, close to the Red River, in 1855, with 500 carts. From fifteen to twenty miles was considered a good day's journey, and it took a month to travel from Fort Garry to St. Paul. The freight rate was sixteen shillings per 100 pounds, payable in cash or goods, but when the West heard rumours of the first "freight rate increase," there was immediate interest in other means of transportation.

Stage coaches and bull-trains were a later development. 'n a bull-train, each unit consisted of from six to twelve pairs of oxen driven tandem and hitched to three heavy freight wagons, coupled together like freight cars. Up to twenty tons of freight could be carried on three such wagons. The wagons were of strong construction; they resembled large hayracks and had a gauge of six feet. The bullwhacker or skinner, as the driver of a train was called, walked or rode a horse beside his teams. In either case he brought with him a stout whip and a well-cultivated vocabulary and used both in the manner becoming a master. Good leaders, who would respond to the well-chosen vocal signals, were considered invaluable in bull-teaming. A day's travel was about ten miles.

Those big bull-trains flourished in the prairie area west of Cypress Hills and south of a line marked later by the C.P.R. Much of the traffic was connected with Fort Benton on the Missouri River, which offered an all-water connection with the Mississippi and the outside world. This was a good route because firm, dry ground was necessary to the success of bull-train freighting.

Hamlin Garland, the American novelist and poet, once likened the railroad to arithmetic, the wagon road to prose, and the trail to poetry. He would have enjoyed a continuous poetic feast in the early West. The tortuous cart and wagon tracks across the prairies, over hills, and through rivers and

streams, were worn deep before the advent of railways. As the ruts became too deep to be serviceable, carts were operated with one wheel in a track and one on the sod; thus new tracks were cut. John Macoun wrote in 1882 that on the main trail to Battleford and Edmonton "twenty such ruts can now be counted running parallel to each other." Some of these trails endured far into the twentieth century to tempt and test shortcut-minded Model-T Fords.

There were several early trunk routes. One of these, a well-beaten trail of nearly 1,000 miles, led from Fort Garry, via Portage la Prairie, Fort Ellice, Fort Carlton, and Fort Pitt, to Edmonton. Another trail followed the North Saskatchewan, on its north side, from Carlton to Edmonton; this one was favoured ultimately because it presented less danger from Indian attack. When John McDougall went to Edmonton in 1862, the nearest doctor was at the Fort Garry end of the trail.

An important trail connected Edmonton with Fort Benton on the Missouri River. Another ran from Fort Carlton on the North Saskatchewan, crossing to the east side of the South Saskatchewan near the present site of Saskatoon, and going on to Fort Benton. After the C.P.R. began to operate, this latter trail terminated at Swift Current. Important trails led from Fort Ellice in various directions.

The freighters on those long trails were a hardy lot. They had to be. Frank Oliver, who represented his Alberta constituency in the House of Commons for many years after 1896 and in 1905 became Minister of the Interior, began freighting over the Fort Garry-Edmonton trail in 1876; and Adam McKenzie's creaking wagons rolled over it a short time later. The Queen's mail was carried at the same rate as other freight and, needless to say, was not always on time. In 1876 John Todd, who died in 1943, contracted to carry the mails between Battleford and Edmonton. The 21-day round trip was made by Red River cart in the summer and dog sleigh in the winter. The journey had to be completed regardless of weather

or Indians. Once Todd made it from Edmonton to Battleford on foot in eight and a half days, carrying the mail on his back. Mail wasn't heavy in those years. It wasn't every homestead that boasted such luxuries as pen and ink, and the folks back home considered praying more helpful than writing.

Attractive tales can be told concerning cart trails which became important highways. Portage Avenue and Main Street in the city of Winnipeg offer examples. One of the best comes from the midwestern states. It was in 1839, so the story goes, that two merchants in Dubuque listened to a homesteader who had been lost for five days trying to take his family over the treeless prairie to Iowa City. Lyman Dillon, a young chap thoroughly familiar with the prairie country, volunteered to plough a straight furrow connecting the two points. The very next morning, Dillon hitched his five oxen to a plough and took his place between the handles. Behind the plough came a creaking covered wagon carrying provisions. Dillon's sense of direction was good. After four days, during which the plough was not taken from the ground, the ploughman drove directly upon Iowa City and stood at the end of a 100-mile furrow. Beside the long furrow there arose a trail, then a busy road; ultimately a concrete highway. The Dubuque Highway was laid over Dillon's furrow.

Although not as conducive to speed as the modern highway, the prairie trail had captivating features. It was often a better road than the imperfect highway which superseded it. An easterner who visited the West reported that the roads were good "except where somebody had tried to fix them."

Settlers heard the first steamboat whistle in the same year that Palliser completed his epic survey. Captain Anson Northup, who secured his steamboat experience on the Mississippi, brought on old "stern wheeler," which he called the *Anson Northup*, to ply between Minnesota points and Fort Garry.

After operating for two years, the *Anson Northup* was replaced by the *International*, a craft measuring 137 feet in

length. Norman W. Kittson ran the *International* for a few years and then bought her. Regular river service was inaugurated between Fort Garry and Georgetown in 1861, and a stage coach service between the latter point and St. Paul provided scheduled communication with the outside world. With the river and stage service to St. Paul, the journey from Red River to Montreal could be completed in fourteen days. In 1871 James J. Hill, of railway fame, was operating the *Selkirk* between Fort Garry and Moorhead.

Steamboat traffic soon invaded the Assiniboine and Saskatchewan rivers. The *Prince Rupert* ran between Winnipeg and Portage la Prairie in 1876, replacing the stage coach on that route; and the Hudson's Bay Company's *Northcote* began her career on the Saskatchewan River a short time later. The North Saskatchewan was considered navigable from the head of Grand Rapids to a point west of Edmonton. The Assiniboine was navigated to Fort Ellice in 1879, the *Marquette* and the *Alpha* being the first to reach that point. A few boats made the journey as far as Fort Pelly.

This river service was an important step in the development of western transportation, because overland freight charges were considered to be too high. On goods moving from Fort Garry to Carlton the price was five to six cents a pound. But freight was carried by river boat from Winnipeg to Prince Albert for three cents and to Edmonton for four cents.

Passengers who chose to travel by river boat could get a lot for their money. According to Macoun, the passenger steamers of his day were "models of beauty, speed, and comfort, with officers who are gentlemen, as well as thorough and experienced boatmen." Yet travellers could go from Winnipeg to Prince Albert with the luxury of cabin accommodation for \$30 and if they were willing to sleep on the deck, the passage was half as much. From Winnipeg to Edmonton the corresponding rates were \$40 and \$20 per single fare. Since these crooked rivers cover great distances, these lower figures represent travel at less than a cent a mile.

Distances by river were greater than most people realized. Winnipeg to Brandon was less than 150 miles by trail but roughly 500 miles by the loopy Assiniboine River. That's why some of the travellers saved time by walking.

There were no vessels on western streams which actually classified as battleships, though Spence's "Republican Monarchy" had plans for some Assiniboine gunboats. The *Northcote* saw active service in 1885 in the North West Rebellion, when General Middleton ordered her to carry troops to meet him at Batoche. As the *Northcote* approached, it became the target of rebels on both banks, and a stout cable stretched across the river, not detected by the skipper until too late, sheared off the funnels as the boat passed under it.

In the absence of bridges and ferries, streams were crossed by fording or rafting. Either might be hazardous. The first ferry in the Winnipeg area operated a short distance north of the present Norwood bridge. Its location in relation to the forks of the Assiniboine and the Red was such that it could serve both sides of both rivers. The elaborate steam ferry *Adelaide* was placed in service there about 1877. It was 90 feet long and 30 feet wide and could carry twelve teams and a substantial number of people. Such a magnificent vessel caused people to stand and gaze in admiration.

In the year 1877-1878, only two ferries in the Northwest Territories paid the licence fee of \$4; one fee was paid by Gabriel Dumont and the other by H. D. Macdonnell. The latter was for a ferry on the Assiniboine near Fort Ellice. The ferry at Clark's Crossing on the South Saskatchewan was constructed and operated soon after J. F. Clark settled at that point in 1884. It was used extensively at the time of the rebellion. Other important Saskatchewan River ferries were at Fort Carlton, Battleford, Fort Pitt, and Edmonton on the North Saskatchewan, and at Gabriel's Crossing and Saskatoon on the South Saskatchewan.

But it was perfectly obvious that until there were better facilities for transportation between East and West, the latter could neither be controlled nor developed with any degree of

success and agricultural progress would be slight. An all-British route via Thunder Bay and Lake of the Woods, part of which was known as the Dawson Trail, was started before Confederation; it was a combined wagon and water route. This amphibious highway, named for the surveyor Dr. S. J. Dawson, touched Prince Arthur's Landing at the top of Lake Superior. It passed for 125 miles up Rainy River, across Lake of the Woods, and finally from the northwest angle of the lake by a 95-mile wagon road which terminated at St. Boniface. The Dawson route in the seventies was more economical but less attractive to most travellers than the American route, which offered rails to a point on the Red River. It was by the Dawson route, however, that the Wolseley expedition travelled to quell the halfbreed trouble at Red River, and it was over the same route that the first contingent of North West Mounted Police came in 1873.

For many years the mere mention of a railroad linking Canada east and west invited a laugh in most quarters. Joseph Howe, the Nova Scotia statesman, seems to have been one of the first to make bold public statements about an ocean-to-ocean railroad. Addressing a meeting in 1851, he prophesied: "I believe that many in this room will live to hear the whistle of the steam-engine in the passes of the Rocky Mountains, and to make the journey from Halifax to the Pacific in five or six days." Some of his listeners cried, "Fantastic!" but his vision was to be realized. From the time of Confederation it became increasingly clear that failure to develop the West might lead to rupture, with the loss of a portion or all of that territory to the neighbouring nation. British Columbia's entry into Confederation in 1871 was conditional upon a guarantee from the Dominion of such a railroad within 10 years, and the survey began in 1871.

There was difficulty in deciding upon the best route through the midwest. The Park Belt, with its recognized advantages in productivity, made a stronger bid for the route than the prairies. The War Office suggested that the proposed

railroad should be a "safe distance" from the American boundary. The first midwestern route to receive approval was to run in a northwesterly direction from a point on the Red River to cross the narrows of Lake Manitoba. From there it would go by the Swan River Valley, pass over the South Saskatchewan at Clark's Crossing, touch Battleford, pass south of Edmonton, and manoeuvre the Rocky Mountains by Yellowhead Pass, then considered the only practical route.

Political disputation and changes in government delayed action on the larger plan, but the completion of the Winnipeg-Pembina line on November 3, 1878, gave Winnipeg a rail connection with Emerson and the long-dreamed-of all-rail route to the world beyond became a reality. The first train out of Winnipeg that year was a "mixed." It comprised a string of flat cars and a boxcar for the comfort of passengers. The boxcar, dubbed "Joe Upper's private parlour car," was furnished with straw on the floor, a few rough benches, and a wood stove so that its occupants could sleep, sit, or eat, and generally enjoy the luxury of modern travel.

Strangely enough, Winnipeg had a train before a completed railway. A noble little wood-burning locomotive, which had done service on American lines, was purchased and brought to Manitoba by Joseph Whitehead, who held a contract for work on the Pembina branch. With six flat cars, it was delivered at St. Boniface on October 9, 1877, having come down the Red River from Moorhead, Minnesota, on a gaily decorated barge tied to J. J. Hill's steamer *Selkirk*. The locomotive, the first in the West, carried the proud name *Countess of Dufferin*, received from the Governor-General's lady when she visited the West that summer. "The Countess" now occupies a position of honour in Sir William Whyte Park, Winnipeg, beside the C.P.R. depot.

The Canadian Pacific Syndicate received its charter in 1881 and agreed to complete a transcontinental railroad in ten years. By the terms of the contract, the company was to be granted 25,000,000 acres of prairie land, \$25,000,000 in

cash, and the 713 miles of railroad that the government had already built. Other concessions included exemptions from land tax for twenty years and freedom from import duties on materials for construction. It was understood, too, that for a period of twenty years, no charter would be granted to a road which would be in direct competition, although this monopoly was relinquished in 1888.

Immediately the syndicate displayed interest in a more southerly route across the midwest and revived consideration of the Kicking Horse Pass, a mountain route discovered by Dr. Hector. Obviously the Kicking Horse Pass, or Bow River Pass, had the advantage of directness between Winnipeg and the Pacific. With an increasing respect for the agricultural resources of the prairies, the route ultimately chosen was across the plains, almost parallel with the international boundary. Work commenced at once.

The beginning of active work in railway development gave a considerable fillip to settlement. Even in 1878, 4,000 homesteaders filed claims, the largest number to date. And as the work advanced British and Canadian groups moved westward together to form their own communities. Among these were the York Colony, organized in Ontario's York County and established along the Little White Sand River at the present Yorkton in 1882, the Cannington Manor Colony established near the Moose Mountains 45 miles south of Moosomin Siding in 1883, and the Crescent Lake Colony southwest of the present Saltcoats.

The Crescent Lake Colony was fairly typical. Crescent City was planned and named as the urban centre before the members saw the site. The first settlers left Toronto with carloads of effects on March 27, 1883, and arrived at Qu'Appelle, then called Troy, on April 1. They were still more than fifty miles from their land and the last lap of the journey by wagon produced hardships and problems. The mosquitoes extended a special welcome; one newcomer wrote that "the plagues of Egypt could not have been worse."

Crescent City took form at a rate which would have worried a mushroom. J. G. Phelps built a log store, and all at once the village had a tinsmith shop, a carpenter, a music teacher, an engineer, a miller, and a telegrapher, although no telegraph wires. There were sixty persons in and about Crescent City before the summer was past. The mail was carried from Broadview. Ephraim Boake was one of the first mail carriers; he drove a mule that was noted for its single gait, something faster than a walk but slower than a trot. On a winter trip, Boake was frozen severely. When asked why he did not run behind his sleigh and thus keep from freezing, he replied, "I'd rather freeze like a man than run like a dog." The frontiersmen were individualists, no two alike.

When the Manitoba and North-western Railroad, which was expected to go through Crescent City, took a more northerly course, the upstart town disappeared. All that remained to mark the place was the partially filled basement of the old mill, on S.E. 18-23-3-2.

While railway activity thus attracted serious settlers and hopeful industrialists, the Indians and halfbreeds were less happy. Before the advance of the white men and the organization of Manitoba they had retreated to the great plains, and now they seemed about to be driven from these fastnesses also.

The Indian treaties of the seventies had not by any means ended the difficulties between the administration and the native peoples. Treaty money, to be paid once a year "while grass grew and water ran," brought but momentary appeasement. It provided \$25 for each chief, \$15 for each councillor and \$5 each to others. Too often the payments were followed by a few hours or a few days of reckless spending at the end of which the traders who flocked to the scene had all the money. It was then the Indian's privilege to nurse his misfortunes and his wrath until treaty day came again.

It had been hoped that the Indians would be satisfied to settle down to some form of agriculture on their reserves. But

farming was as foreign to them as higher mathematics and about as inviting. Nomadic instincts and love of the chase were not to be subdued quickly. They nursed a grudge and it was plain that their agricultural progress would be slow. It is not surprising that they found it difficult to make the adjustments demanded when the white man took possession of the country. Nor is it surprising that cattle killing, horse stealing, and the urge to revolt became prevalent among the natives after they were separated from their old foundations. The reserves, which were a provision of the various treaties, imposed restraint and restraint was hateful.

From 1879 to 1882 the prairie Indians suffered varying degrees of starvation and gave the police the trouble which might have been expected. As half-starved Indians rode over the prairies in search of food and saw white men's cattle occupying the ranges upon which the buffalo had grazed, the lust to kill must have been very great. Under the impulse of hunger, loss of freedom appeared more important and they became defiant. Colonel Macleod drew attention to the seriousness of the position but the government was lax.

The railway became a symbol of this loss of freedom and in 1882 Chief Piapot and his followers encamped on the right-of-way east of the present city of Regina, determined to prevent forcibly the continued construction. It was Canada's first recorded "sit-down strike," but the hostile band was strategically dispersed by two Mounted Police dispatched for the purpose, doubtless the first occasion on which the Force acted as strike-breakers.

The threat of a major Indian uprising was very great. It produced many sleepless nights in homestead homes and there were some local tragedies, such as the massacre at Frog Lake. But happily the open revolt was confined almost entirely to the halfbreeds. The Métis on the South Saskatchewan, like those on the Red fifteen years earlier, were worried for fear they would lose their lands, and the authorities at Ottawa showed little more than an academic interest in their misfortunes. It was the old story of a frontier group puzzled

and alarmed at the advance of a civilization which did not bother to make itself comprehensible to them or to win their trust.

The frontiersmen asked for the division of the Territories into provinces, territorial grants to the Saskatchewan Métis similar to those made in Manitoba, titles to land already occupied, sale of 500,000 acres to provide for schools and hospitals, agricultural assistance, reservation of 100 townships of land for children of the Métis, grants for the establishment of an academy at each settlement, and improvement in the conditions of the Indian nations.

Their petitions fell upon deaf ears and, in March, 1885, hostilities began by the looting of stores at Batoche and St. Laurent. The first encounter, at Duck Lake, was a victory for the local boys, and there was consternation in both East and settled West.

Although the road north of Lake Superior had an uncompleted, ninety-mile gap, chief engineer Van Horne undertook to transport troops to the West in ten days. Amid public acclaim, he actually succeeded in conveying them from Kingston to Winnipeg in four days, a striking contrast with the ninety days taken by Col. Garnet Wolseley's expedition to check the uprising of 1869-1870. Thus, not for the last time, military necessity justified to public opinion a costly development that wiser leadership had already long recognized as a social and economic necessity.

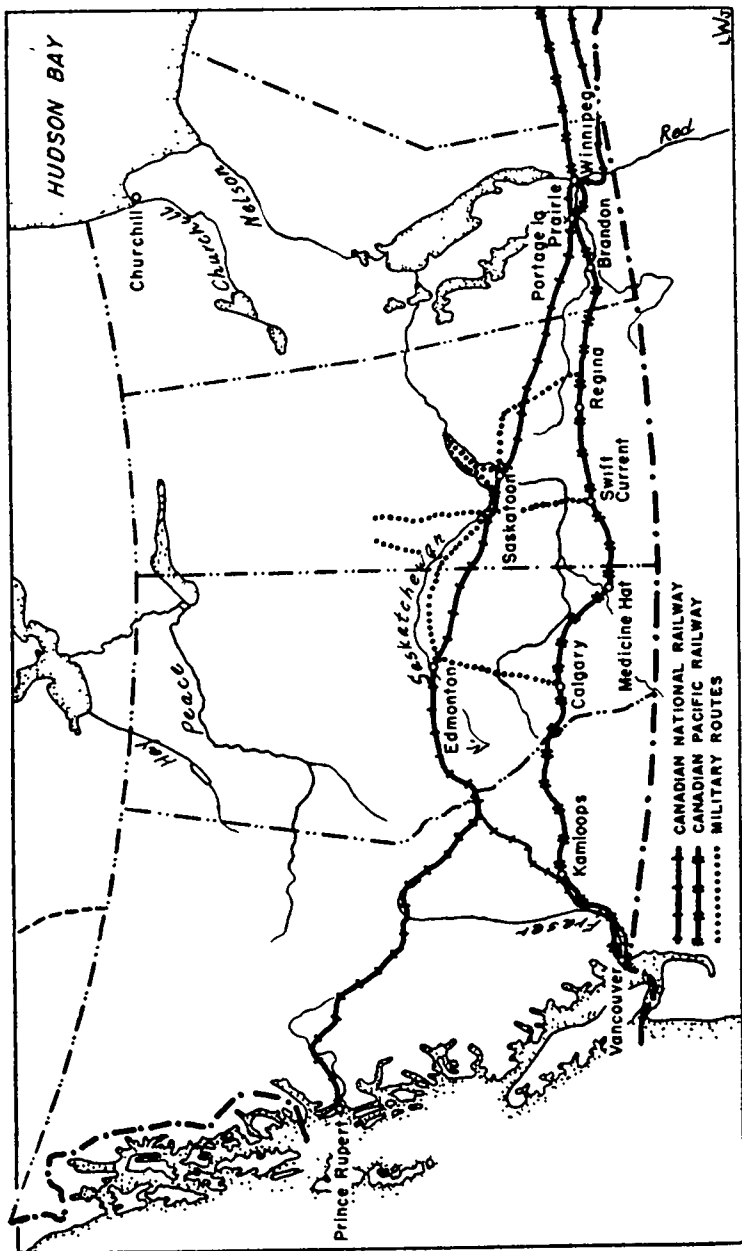
When Big Bear's Cree Indians attacked the settlement at Frog Lake on April 2, massacring nine men and taking several women prisoners, news spread rapidly across the prairies, and fear-filled settlers prepared to make a stand for their lives. Horses and cattle were turned loose. In some districts the farms and homes were deserted, although there were notable exceptions where lonely homestead cabins became virtual arsenals. Springtime seeding operations came to a standstill, while many of the homesteaders congregated in the settlements where organized resistance was possible. At Edmonton 500 whites sought the protection of the fort with its fourteen-

foot stockade, four bastions, and four-inch guns. A thousand Indians were reported to be encamped near by, preparing to attack.

The Blackfoot about Calgary were nearly ready to rise against the whites but by wise diplomacy on the part of Father Lacombe and the Reverend John McDougall, this disaster was prevented. At Battleford the proximity of the disgruntled Crees gave good cause for uneasiness. The citizens in and around Saskatoon could see themselves caught between crushing jaws. There was Duck Lake, the hub of hostilities, about fifty miles to the north, and there was Chief White Cap's band of Sioux on the Moose Woods Reserve, a few miles south. As was expected, White Cap and his braves broke camp to join Riel. They marched through Saskatoon on their way north but refrained from anything more serious than the killing of a few cattle.

At Yorkton where the York Farmers' Colonization Company had been allotted land, the settlers volunteered to serve under Major T. C. Watson, sent out from Ottawa to provide leadership. On April 18 the Major addressed a meeting of all those who could be called together, and about forty men enlisted at once. His plan was to begin forthwith to build a stockade with log houses inside it.

Settlers and their teams began hauling logs, 11 feet long. The stockade was to be 150 feet square and about 2,400 logs were needed. The logs were set on their ends, three feet in the ground and eight feet out. At two opposite corners, bastions which would command all walls were built. Inside was an earth embankment, four and one-half feet high, to furnish further protection for men firing from a standing position. The necessary loopholes for guns were cut in the stockade. Inside, the settlers built two log houses and a guardroom, dug a well, and made an oven for baking bread on a large scale. Nothing was overlooked and the settlers were ready to move into "Fort Watson" if necessary. The Little Bones Indians, about eight miles southwest of Yorkton, grew bold and reckless but made no direct attack.



MAIN RAILWAY LINES IN WESTERN CANADA TODAY, ALSO MILITARY ROUTES IN NORTHWEST REBELLION, 1885

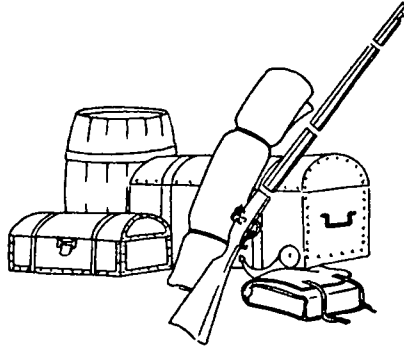
Some of the settlers saw active service, but they were not trained soldiers and more of them served as scouts and freighters. Freightng from Moosomin or some other point on the C.P.R. to the military posts in the north was as essential as carrying guns and it was more profitable. Government pay looked big and quite a few homesteads and farms were abandoned for the freightng season. A man and team collecting ten dollars a day would soon earn more than the yearly return from most quarter-section farms. John Stewart undertook to carry supplies from Moose Jaw to Clark's Crossing for \$110 a ton and from Qu'Appelle to Clark's Crossing for \$150 a ton. His government contract said he must travel not less than twenty miles a day and be prepared to carry wounded soldiers on the return part of the journey.

Shortly after the last embers of rebellion were extinguished, the last spike of the Canadian Pacific Railway was driven at Craigellachie. The Indians went back to their reserves. A number of the most influential chiefs were given luxurious trips to Eastern Canada where they met government officials and saw something of the country's strength. Homesteaders returned to the task of breaking sod. Two years later the handsome stockade erected at Yorkton, and never used, came down and the logs went into farm buildings. Folk in the farming country felt new hope and new confidence.

Notwithstanding recurrent financial difficulties, 161 miles of track had been laid in 1881, and in spite of a late spring, Van Horne's plans for 500 in 1882 failed of their objective by only forty miles.

The rails reached Winnipeg from the east in 1879 and the boom which followed in that city, reaching its peak about two years later, created a new world's record. Brandon was on the railroad by 1881, Moosomin by 1882, and Calgary by 1883, and settlers followed the railroad. The first freight shipments began to move out in 1883 with buffalo bones gathered after the great destruction as the chief cash crop. Thus did the varied factors preparing the prairies for settlement interlock.

5 *The Tide of Settlement*



ALL was now in readiness for the new wheat economy which was to replace the fur-traders' empire on the Canadian prairies. All, that is, but the people to establish it. Civil government had replaced trading company rule. The disappearance of the buffalo had made the old nomadic hunter's life impossible. The last revolt against the advance of civilization had been crushed, and the forces of law and order were well organized throughout the territory. Finally, and most important of all perhaps, a substantial beginning had been made on that network of railways which was to be the basis for the modern system of wheat marketing. But, although the Land Act had been in force for more than a decade, comparatively few settlers had yet arrived.

This was due partly to the unfavourable publicity which the territory had received with regard to soil, climate, and administrative problems. Prospective settlers wanted to be reassured and as late as 1881 an English journal warned its readers:

The Canadian Pacific, if it is ever finished, will run through a country about as forbidding as any on earth. . . . British Columbia is not worth keeping. It should never have been inhabited at all.

It will never pay a red cent of interest on the money that may be sunk in it. In Manitoba those who are not frozen to death are often maimed for life by frostbites. Ontario is poor and crushed with debt. It is certain to go over to the States and, when that day comes, the Dominion will disappear.

Equally entertaining, and equally bad for immigration and settlement, was editorial comment originating nearer home as late as 1882, just after Regina was named the capital of the Northwest Territories. The *Manitoba Free Press* said in 1882:

One thing is certain, Regina will never amount to anything more than a country village or town for the simple reason that in neither its position nor its surroundings is there anything to give it the slightest commercial importance. Situated in the midst of a vast plain of inferior soil with hardly a tree to be seen as far as the eye can range, and with about enough water in the miserable little creek, known as the Pile of Bones, to wash a sheep, it would scarcely make a respectable farm, to say nothing of being fixed upon as a site for the capital of a great Province. The place has not a single natural advantage to commend it.

True, it was the site selected for Regina which was the chief object of the Winnipeg editor's attack, but the colossal falseness of his judgment about the surrounding land is worth noting. The settlers who ventured into that section were to show that the soil of Regina plains was without a superior anywhere for wheat production. Almost exactly fifty years after the editorial was written, Regina was hostess to the World's Grain Show and Conference.

Meanwhile, in spite of such criticisms, forces were working towards a great influx of immigration. The new railway was operated with efficiency and success and the loans secured for construction were paid off in due course. Having large holdings of farming land in the West, the company naturally embarked upon a vigorous campaign for settlers.

While the Canadian Pacific was the pioneer railway in the West, numerous other grandiose railway schemes evolved and several took form in the years following. Some, however, never passed the dream stage. The Great Northwest Central had a charter to build from Brandon to Battleford. The Lake Manitoba Railway and Canal Company was to link Winnipeg

and the shore of Hudson Bay. The Manitoba and Northwestern was built and reached Saltcoats in 1888 and Yorkton in 1890. The Qu'Appelle, Long Lake, and Saskatchewan, which provided the first rail connection to Saskatoon and Prince Albert, was built in 1889 and 1890, and the Calgary-Edmonton line was built in 1890 and 1891. The Crow's Nest Pass Railway was built in 1897; the terms of the agreement between the Government and the railway company in this instance provided for reduced rates on western grain and flour to Fort William and other eastern points. Thus while the spread of the railway system was encouraging settlement, its regulation was facilitating marketing.

The buffalo-bone business, mentioned earlier as the first cash crop of many settlers, spread with railways and settlement and was of benefit to both. Regina, Saskatoon, Moose Jaw, Medicine Hat, Swift Current, and Calgary were among the important shipping points. Most of the bones went to the United States, where they were used for bleaching sugar, manufacturing fertilizer, and in some cases for making household articles.

As new railways were built, new supplies of bones were obtainable. The area around Saskatoon provided a bountiful crop for the bone harvesters after the rails were laid in 1890, and the new town witnessed the departure of many carloads of the remains in the peak years of 1891 and 1892. The "bone trail" that entered the city from the southwest became a pioneer highway. Now and again freight cars ran short and the bones had to be piled along the tracks. Each pile was the size and shape of a box-car. Skulls formed the outside walls and the smaller bones were thrown into the centre. Old-timers recalled that the piles of bones waiting shipment at Saskatoon sometimes extended from 23rd Street to a point on the river close to the present railway bridge.

Mrs. Grace Fletcher, James Leslie, and R. W. Dalmage, who operated stores in pioneer Saskatoon, handled most of the bones at that point. But others were in the business too.

The diary of W. H. Duncan, who opened a store there in 1890, showed four carloads shipped on the 6th of September, 1890, seven cars on the 9th, four cars on the 10th, and six cars on the 17th of that month.

All went well until the financial panic in 1893, when the bone boom burst. By that time Leslie was handling nearly all the bone business at Saskatoon, shipping to the Northwestern Fertilizer Company in Chicago. The company got into deep water financially and wired Leslie to stop his shipments. But telegrams did not always reach their destination in those years and the bones kept coming. At one stage thirty-five carloads were being held in Chicago with no prospect of their disposal. However, after a costly delay, the market improved and Leslie sold his bones.

Many of the bones delivered at Saskatoon were gathered by French halfbreeds from Fish Creek and Batoche. Some were gathered by Sioux Indians from the reservation near Dundurn. The halfbreed and Indian pickers usually accepted goods in exchange for bones, and very little cash changed hands. In spite of abundant bones for the picking and a good market for them, the Métis usually contrived to finish the season in debt. W. K. Fletcher wrote to me in 1936 that he recalled Edouard Dumont, brother of the celebrated Gabriel, saying to his mother, Mrs. Grace Fletcher, at the end of the season, "Madam, I owe you forty-five dollars; I send you cattle." The reply would be, "That's fine; send them in the spring." In the following spring a number of cows and calves would arrive to balance the account and everybody would be satisfied.

It was the practice of some of the bone gatherers to set fire to the prairie grass in early spring or late summer, so that the white bones might be clearly exposed to view. "In the spring of 1888," wrote James Leslie to me in 1936, "I went by trail to Moose Jaw. The country south of Beaver Creek had been burned and the buffalo bones showed white; the whole country looked like a very stony Ontario summerfallow."

Another pioneer told of a homesteader working single-handed and gathering three carloads of bones in three weeks. It was his first harvest and a very good one. Basket racks, twelve or fourteen feet long and three feet high, were employed for gathering and the horses which hauled them were of the cayuse or Indian pony type, small and tough. A ton would be an average load. When picking was conducted some distance from a railroad, the pickers with their carts or wagons might travel as a caravan. Such a wagon train might extend, when in motion, for a mile or more on the trail, and the squealing of its wheels could be heard for several miles. Positions at or near the front of the procession were competed for. The better horses and better men won leading places while the slower horses and indifferent drivers sweated amid the dust at the rear.

At first picking was confined to the districts adjacent to the railroads but when these were cleared of bones, the gangs moved farther afield, perhaps fifty to a hundred miles. The district around the present Rosetown was especially productive and so was the Blackstrap Coulee, east and south of Dundurn. At least a hundred cars of bones were gathered up at Hanley. Pickers working in rough country farther south and west found coulees and cut-banks with accumulations of bones totalling up to forty or fifty tons at one place.

James Leslie alone sent 750 carloads of buffalo bones out of Saskatoon and estimated that the total shipment from that point was between 3,000 and 3,500 carloads. Loaded cars carried roughly twenty tons and contained about 250 skulls. If each carload contained the bones of 250 animals, the shipments from Saskatoon alone represented something over 750,000 buffalo. One can only speculate about the quantity of bones which went from all of Western Canada.

Bones delivered at the railroad netted a credit of six to eight dollars a ton for the pickers and more than one homesteader obtained his first plough or first barbed wire or first lumber with 'bone money.' It is surprising and a little dis-

appointing that some Saskatchewan or Alberta town didn't take the meaningful name of "Buffalo Bones." It would have been preferable to some of the imported and unwestern names which were adopted.

The Canadian Northern Railway was an important factor in the years of big development, when the tide of immigration was at its peak. Donald Mann and William MacKenzie obtained their start in railroading while doing contract work on the C.P.R. and later founded the Canadian Northern. The charter held by the Lake Manitoba Railway and Canal Company was purchased in 1896, and construction of the lines which were to become the Canadian Northern Railway began that summer. As long as the new system operated strictly as a western railroad, it was eminently successful. It had but little competition in the more northerly districts of the West until 1905. But the coast-to-coast service offered by the Grand Trunk Pacific, which was building in the West in 1905, forced expansion. Serious difficulties followed when the Canadian Northern became transcontinental, and ultimately led to the formation of the Canadian National Railways, the biggest railway system with single management on the continent.

The Winnipeg real estate boom which came with the rails from the East ushered in a period of land speculation. It attracted a species of "land men" among whom imagination was more evident than honesty. But those promoters have long been forgiven for the lies they told and they might reasonably be thanked for the interest they stimulated in the new soil.

Recklessness with the truth is not to be admired, even in a salesman, but the enthusiasm which the land men brought was exactly what the homestead country needed. It served to counter-balance some of the unjust criticism which had confused and discouraged candidates for prairie farms. The homestead rush began to gather momentum in 1878, and by the later eighties, the critics and pessimists found themselves

out-manoevred and outnumbered. "Go West, young man," was the new slogan. The West became the "Land of Promise." Said Sir John A. Macdonald, "I am told you can come in on the train in the morning and start ploughing in the afternoon." He also quipped, "I am told that some in this new country are not content, but you know, ladies and gentlemen, some of us will not be content in Heaven if we hear of a place farther west."

Whatever its proper name, this enthusiasm was contagious. Claims made for the fertility of the soil, the benignity of the climate, and the certainty of success, were stretched and coloured. But nobody cared much about accuracy. A senator from the East, driving through a new farming district with a frontier booster, heard about record harvests, wheat crops running 60 bushels to the acre, 40-pound turnips, and cauliflower flowers so big that one would fill a washtub. His final observation was, "Well, these folks have either the world's most fertile soil or its biggest liars."

The spirit of the new West was reflected in advertising matter like that which ran in a St. Paul paper:

Buy farmlands in Saskatchewan. You can leave home after Easter, sow your grain and take in the harvest and come home with your pockets full of money in time for Thanksgiving dinner.

Ontario papers of a few years later were carrying paid invitations like the following:

Do you realize what opportunities await you in the West? Surely you do not. You have not investigated, have not figured and have no idea as to what the possibilities are. If you did know, you would not continue year after year to work a living, and nothing more, out of the light soil of a little farm on a hillside. Nor if you are paying rent, would you continue to give the best of your life tilling a farm for another man.

You can easily own one of the best farms in the West. All it requires is a small amount of capital, pluck and energy. If you have the pluck and energy, you can get the capital.

The poet said "Where every man's a liar, that's where the West begins." But the West didn't mind; by temperament the West wasn't touchy, and besides, it was busy building a nation.

Many and ingenious were the schemes employed to hasten the occupation of the land. Halfbreed "scrip" was a factor in land exchange. A scrip was good for a quarter-section and the holder could choose any "crown quarter" which was open for sale or settlement. It was expected that those to whom the scrip was granted in the first place would settle and farm. But the scrip was transferable and immediately became a medium for barter. In too many instances it was exchanged for a few bottles of whisky or their equivalent in money. Consequently, title to much of the best land in good situations passed into the hands of speculators. South African scrip, issued to veterans of the South African war, turned out better, because more of it was retained by the recipients.

Experience with colonization companies was not very satisfactory, although at one period they were highly extolled as an instrument for land settlement. Beginning in 1882, any company which could satisfy the government of financial stability and good faith could secure a tract of land beyond twenty-four miles north from the main line of the C.P.R. and its branches, and beyond twelve miles from any other projected railroad. Even-numbered sections were reserved for homesteads and pre-emptions but the company might buy the odd-numbered sections at two dollars per acre with a small cash payment. The company agreed to place two settlers on each odd-numbered section and two settlers on each homestead section within five years. With the fulfilment of its part of the agreement, the company could anticipate a refund of part of the purchase price from the government; this refund at one period amounted to \$120 for each bona fide settler.

Colonization companies were numerous. A few were well managed and the others were short-lived. The better companies made worthwhile local improvements like roads and bridges, and all, including the failures, served to publicize the West. At the close of 1883, there were twenty-six companies operating in the Territories, these having purchased 2,973,978 acres.

The colonization companies rose and fell; the various varieties of scrip were conspicuous for a short time, but the flow of homesteaders increased steadily. The one-way traffic through the gateway city of Winnipeg grew heavier year by year. It was good for Winnipeg. A few of the homesteaders brought equipment from the East but most of them bought supplies at Winnipeg, paying \$150 for a horse or \$75 for an ox, depending upon their cash reserves. Those homesteaders with capital bought wagons at \$175 and those without it made a deal for a Red River cart at about \$20. There were some like John Stutt, who landed southwest of Moosomin in 1883 with nothing more than the clothes on his back and the Ontario broadaxe which he brought from Bruce County. That axe, however, was not idle. Its owner did the hewing on all the logs which went into the construction of thirteen homestead houses in the district during the first winter.

Homestead districts witnessed rapid and exciting changes. The personnel of a district could change quickly, not only because of incoming population, but because a high percentage of those who went into the homestead districts moved out before "proving up." When a certain settler in one of those new districts was asked if he was acquainted with his neighbours, he replied that he knew them all the day they "built the church last fall," but with so many newcomers he now felt like a stranger. In some districts there was an annual baseball game on the first of July with the "newcomers" and the "old-timers" competing. To qualify for the latter group, a person had to be in the district a year or more.

The eastern provinces contributed generously to the building of the West. French-Canadian farmers of old Red River days moved in a later period on to Alberta soil. Maritime and Ontario people adapted themselves quickly and became leaders of communities. A typical township in homestead country, however, had people from Eastern Canada, the United States, and representatives from enough overseas countries to have constituted a local United Nations Assembly.

Of the many British and Canadian settlements, which sprang up during the early years of immigration to the West, the York, Cannington Manor, and Crescent Lake colonies already mentioned were supplemented by the Montreal Colony at Kinbrae (south of Bredenbury), the Commercial Colonization Co., the Primitive Methodist Colony, the Barr Colony, and the Temperance Colonization Society at Saskatoon.

For a time, British philanthropists, who hadn't considered endowing an art gallery and whose parish church didn't need a new organ, took to assisting settlements in the colonies. Lady Gordon Cathcart met with fair success in her Benbecula Settlement of Scottish crofters southwest of Moosomin in 1883, and Baroness Burdett-Coutts tried to do as much for a group of Londoners. The Church Colonization Land Company organized colonies at Qu'Appelle and Churchbridge in 1888. It was an Anglican clergyman and a leader in the latter organization who wrote that he would advise the use of oxen instead of horses because the settlers would require milk as well as power. But among the more practically minded men of the soil the idea was not well received and ox milk never became popular.

Two communities of English folk, Cannington Manor and the Barr Colony, were unique, each in its own way. Both represented the dreams of idealists who believed that the English way of life could be superimposed upon the freedom of the frontier.

Captain Pierce, a cultured Englishman who had suffered financial reverses, chose a new home for his four sons and four daughters in the Northwest Territories—nature unspoiled. To his dismay, Pierce discovered that the area of his choice had been withdrawn from homesteading, but after he talked to Sir John A. Macdonald, the land he wanted for his sons and himself was thrown open for one day. One day was all he needed.

He had told Sir John of his hope of establishing a colony of English people with refined tastes and some means. With a little publicity in England, the right people could be induced to

come, he was sure. In view of the low taxes of the West, English people with some modest income could live on their farms in great comfort.

The Pierces built a large home and the family arrived on January 28, 1883, after driving the forty-five miles from Moosomin in a spell of severe cold. Their first crop totalled 80 bushels of wheat, 110 bushels of oats, and 45 bushels of barley. It was a small harvest with which to meet the year's expenses but the general plan for settlement was working well and many well-to-do English families were attracted. Captain Pierce engaged a farm instructor and took pupils, mostly young Englishmen, for tuition at \$500 per year. This proved more profitable than farming and more entertaining. At least a few of these young Englishmen, who arrived heavily loaded with good clothes, polished guns, expensive saddles and red coats for the hunt, remained to become successful farmers in blue jeans and wide-brimmed straw hats.

Logs were taken out in the winter of 1883-84 and in June the people of the community gathered to build the first Anglican church in the region. It was not handsome, but it gave the new community a church home, and it became especially famous for its choir.

Machinery for a mill came in 1885 and was freighted from Moosomin. An exhibit of flour from that mill once brought distinction to Cannington Manor by winning a gold medal at the Paris Exposition. Then a cheese factory was started and a pork-packing plant was planned. But there was rather more of planning and playing than of building.

In social activities, cultural enterprises, and sport, Cannington Manor was a generation ahead of any other western settlement. Hospitality and sportsmanship reigned. Dances were conducted on a regular schedule. Cricket, football, tennis, horse-racing, fox-hunting, boating on Cannington Lake, and even cock-fighting, were everybody's pastimes. For these sports even the newcomers found time. But of all the sports, horse-racing was the favourite and on many occasions local traffic

and industry were suspended while a matched race was conducted on the village street. The annual agricultural fair held at the beginning of October was said to be one-quarter agriculture and three-quarters horse-racing.

The Beckton brothers, Ernest, William, and Herbert, imported Thoroughbred horses from England and sponsored the Cannington Manor Turf Club. The Becktons were the first of their kind under western skies. The first two had been farm pupils with Captain Pierce, but all that the frontier had to offer failed to inspire them until some almost forgotten stock in an iron mine, given years before by a disgruntled grandfather, became "good." The boys came to life. They became the most colourful figures in a colourful community. They played vigorously and entertained lavishly. A 21-roomed stone house was erected on their Didsbury Stock Farm and a man hauled wood all winter to keep it warm. Other buildings were constructed to house horses, cattle, pigs, foxhounds, and game birds. The "Ranche" witnessed glorious times—race meets, bachelor celebrations, hunting parties, and parties of unclassified varieties. Hounds were imported and the local coyotes and foxes, which were plentiful enough, had no peace.

Eight high-class Thoroughbred horses were imported for the Beckton stables in 1889 and a groom, Keale by name, was employed. Beckton horses went to race meets far and near. A Kentucky-bred stallion, Jase Phillips, with a fine record on United States tracks, was secured to head the stud. Best known of the mares was Imogene 2nd, who, with the well-known Métis called Nigger Joe in the saddle, ran away with the Queen's Plate in Winnipeg. Some people thought that the little mare from the homestead country should have shown more respect for the feelings of the famous Winnipeg Thoroughbreds; but she must be forgiven because she could not have realized how embarrassing she was making it for the sophisticated local racers.

Cannington Manor was not like any other settlement before or after it. It was exactly what one would not expect to find west of the Manitoba border.

The Barr Colony came later. This brain child of Rev. I. M. Barr was conceived in the summer of 1902 when Barr visited Canada. He, too, got the idea of a small settlement of English people with some means and an interest in farming. But as a publicity agent Barr was a better man than he knew and the response to his announcements about the proposed Britannia Colony far exceeded his expectations. The result was that he found himself responsible for a much bigger enterprise than he was capable of directing.

In any case it was an ambitious plan. A large tract of land west of Battleford had been secured and a syndicate store, a hospital, and a transportation organization were supposedly assured. In January a gentleman who said he was Barr's purchasing agent arrived in Saskatoon, and announced that he was authorized to buy 400 yoke of oxen for the settlers who would follow. But in most cases, when the settlers asked to see his money, the deals collapsed.

Boats were chartered to carry the colonists from England to Saint John, New Brunswick. Facilities along the way were not as planned or promised and as hardships multiplied, dissatisfaction grew. The settlers were to break their journey at Saskatoon and there secure much of the equipment which they would require. James Clinkskill, at that time a merchant in Saskatoon, was an eye-witness, and recorded the arrival thus:¹

At eleven in the morning of Friday, the 17th of April, the first train of immigrants came in, fourteen coaches with five hundred and ten people on board. At six that evening the second train of eleven coaches with four hundred and ten people and on Saturday morning the third train arrived with five hundred and seventeen on board. The baggage followed in a few days in a special train of baggage cars. Barr had made absolutely no preparation to take care of this large body of men, women and children. In London he had sold for cash, tents and waterproof sheets, guaranteeing to have them at Saskatoon awaiting their arrival. Some of the tents were in the baggage cars; some were never delivered at all. The Dominion Immigration Department anticipating trouble had a large force of their men under Superintendent Speers on the spot. These men provided some tents and endeavoured to alleviate the suffering as far as possible. After a few days the camp

¹Manuscript loaned to author.

began to take shape. The weather was cold and bleak. The women and children, yes and many of the men, unaccustomed to living outdoors, suffered great hardships.

Five hundred tents were ultimately set up in Saskatoon and merchants did a flourishing business. The biggest trade was in horses, oxen, wagons, ploughs, axes, guns, farm implements, and supplies of food for the 200-mile trek to the site of the present Lloydminster, where Barr had secured the reservation of fifty-six townships. Mr. Clinkskill said there was "a double shift of bakers turning out innumerable loaves of bread that were carried off as fast as they came from the oven." And doubling of prices to aid the newcomers in spending their money didn't seem to bother the local merchants in the least.

The immigrants became more and more convinced of Barr's insincerity and discontent mounted. After needless delay in getting away from Saskatoon, some malcontents deserted.

Of those who bought horses or oxen and started over the spring trail, many were driving for the first time in their lives. As might be expected, awkward situations arose, including one runaway per day on the average. The spring trails were bad and many of the travellers became bogged in sloughs. They were not experienced horsemen and the morning chore of harnessing was one of the challenges of the day. Some carried pocket charts which named the anatomical regions of a horse and showed where the harness should rest. Others used marking chalk to sketch diagrams on the horse's hide. The idea was that anyone who could read a blueprint or a road map should be able to harness a chalked horse. But many of the horses and oxen became thin and some died on the trail. The party spent nearly two weeks going from Saskatoon to Battleford, which was just halfway.

A few of the more timid turned back but about three hundred outfits finally reached the "promised land." Troubles, however, were not over. Location of land, erection of buildings, and the cultivation of the prairie sod presented new tests and new trials.

Said one of the colonists, the plan was "well conceived but hopelessly carried out." Barr was concluded to be fraudulent and was deposed very soon after the journey. It was then that Rev. George Exton Lloyd, later Bishop Lloyd of Saskatchewan, assumed charge of the colony. For that same worthy gentleman the town of Lloydminster was named.

Many of those who came with the Barr Colony party were entirely unfamiliar with agriculture in any form and experience was costly and sometimes embarrassing. Not all the stories told had any foundation in fact and it is difficult to separate the authentic from the false. It is told, however, that one of the aspiring farmers, hearing that bran was likely to be high in price, seeded it on four acres of his newly broken land. Another endeavoured to winter his brood sow on hay. Splitting kindling wood is always a hazardous undertaking and one resourceful soul adopted the policy of standing in a washtub to protect his precious toes; it was while he was executing his task in this awkward position that a piece of wood rebounded from the axe and injured his eye. Then there was the driver who was worried about the steep grade at Eagle Creek. He had no brake on his wagon so he hobbled the oxen which were hitched to the load.

There were mistakes and needless hardships and the seasoned Westerners were amused. Discouraged colonists went back to England. But the men and women who refused to surrender to reverses became the nucleus of a progressive farming community with good homes, good livestock, and advanced ideas about soil and crops.

The majority of the early settlers in the West had little thought for records and left no written accounts. It was different in the Barr Colony. Culture was rampant; these homesteaders took time to read and write and attend their Literary Society. Thus the record concerning the homestead years is more complete for the Barr Colony than for any other agricultural community. Robert Holtby's scholarly day-to-day account of the great adventure of 1903 tells about the expectations and

emotions of the colonists as they left their homes in comfortable old England and crossed an ocean and most of a continent to settle on an uncomfortable frontier. Several extracts from this interesting and illuminating diary appear at the conclusion of this chapter.

Of the organized groups to come from the United States, none imparted more industry and character to Canadian life than the Mormons. Growing opposition to their customs prompted Charles Ora Card, son-in-law of Brigham Young, to set out from Utah in search of a suitable location elsewhere. Arriving at Calgary late in 1886, Card and his little party bought a team and wagon, and a plough with which to test the soil. The land they favoured at High River was not available on account of a lease and they pushed on to Lee's Creek where they decided to locate.

Next summer twelve families, travelling by covered wagon, camped at Lee's Creek on the site of Cardston, now graced by a million-dollar temple, a reminder of earnest and devoted pioneers. Other settlers followed and holdings were extended. In 1904 the Mormon Church bought the deeded land of the Cochrane Ranch Company.

These settlers from Utah had progressive ideas about industry and co-operation, and they were the first to adopt irrigation. Alberta's beet sugar industry began in the Mormon districts.

No date in the history of Canadian immigration is more important than 1896. In that year Clifford Sifton of Manitoba, later Sir Clifford, became Minister of the Interior in the federal government. He was a man of unusual energy and drive, and his programme for immigration was the most ambitious yet undertaken. The gates of the new land were thrown open and settlers urged to come. Displays and exhibits telling about the cheapness of the land and its fertility were sent abroad. Immigration offices were opened in many parts of the world. Successful farmers from Manitoba and the Territories were sent to the eastern provinces and across the Atlantic to inter-

view prospective settlers at meetings and market places and convince them of the opportunities awaiting them.

The response was great. Eager and expectant homeseekers flocked across the border from the south and entered at eastern seaports by thousands. The Saskatchewan Royal Commission on Immigration and Settlement (1930) noted:

Between the years 1897 and 1912, 961,000 immigrants arrived from Great Britain and 784,000 from the United States. Under the Sifton policy Canada grew as fast from 1900 to 1910 as she had in the three preceding decades. The population of the Dominion increased from 4,833,239 in 1891 to 5,371,315 in 1901, and by 1911 it had reached 7,204,838.

The homeseekers established a new yearly record for homesteads in 1909, something like 18,500 entries being filed in the Dominion Land Office at Moose Jaw alone. Between 1901 and 1914 a total of close to 400,000 entries was made and two-thirds of these were from immigrants. The peak for immigration came in 1913 when Canada admitted 402,000 newcomers.

Unfortunately, there was a big movement outward as well as inward and the net increase in population was not as large as it might have been. While Canada admitted six and one-half million people in the ninety-year period prior to 1941, the drain as a result of emigration in the same period was about six million. The most important periods of exodus, however, were 1860 to 1890 and the ten years after 1920. But during the last decade of the nineteenth century and the first of the twentieth the tide of settlement was flowing strong and full into Canada. The western part of the United States had ceased to offer strong competition for new settlers by the beginning of the Sifton regime, and thousands of Americans were crossing the border northward. Cheap land, low taxation, a sound banking system, and law enforcement were the reasons given. Many came with capital and many settled on Canadian Pacific Railway land in Alberta.

The Canadian Pacific Railway, as the biggest landowner in the West, exclusive of the Government, was most active in pro-

moting immigration. Between 1881 and 1937, C.P.R. expenditure on immigration and colonization totalled \$80,000,000.

The Saskatchewan Valley Land Company was also an effective colonizing agent and brought many people from the United States. Colonel Davidson, from Minnesota, was the prime mover. He bought half a million acres of prairie land from the Dominion Government and a similar amount from the Qu'Appelle, Long Lake, and Saskatchewan Railway. The price was approximately a dollar per acre, with a proviso that the company would place sixteen settlers in each township. Including land which the company handled and sold for the Canadian Northern Railway, the total was about five million acres. Selling agencies were maintained in many countries and nearly 50,000 families were brought to the West.

Altogether, a million Americans came to Western Canada in the first twenty years of the present century. In the first decade, 44 per cent. of the homestead entries were made by people from the United States. So great was the movement that in 1910 the United States authorities voiced alarm and proposed a campaign to check the drift.

Settlers from many parts of Europe were among those flocking into Western Canada in the quarter-century between 1885 and 1910. Not all took up land. Some performed much of the heavy work of development, building railroads and digging the country's ditches. Scandinavians were among the most energetic and became good Canadians. German settlers invaded the frontier shortly after 1889. A large German Catholic colony in the general area of Humboldt began in 1902, most of its members coming from Minnesota or direct from Germany. Father Bruno, for whom a Saskatchewan town was named, was the able leader. Hungarians went northeast of Minnedosa about 1882 and three years later, Count Esterhazy, a Hungarian nobleman, assisted a colony where a Saskatchewan village now bears his name. Ukrainians came in numbers after the beginning of the century and were attracted by the park belt.

The Doukhobors, a persecuted people from Southern Russia, were attracted by the soil and freedom offered by the West of Canada. They were pacifists and vegetarians. With some of them the prohibition extended to eggs and milk in their diets and leather in shoes or harness. Anglo-Saxons in Doukhobor districts found their neighbours difficult to understand, especially when a few undertook to vary the prairie landscape by nude parades.

Some of the earliest Doukhobors to arrive were assisted by Count Leo Tolstoy, the Russian writer, statesman, and reformer. These settlers came in 1899 and built shacks on section 27-29-1-W2. The village of Veregin became the centre of a large Doukhobor community. Another group went to Arran about the same time.

The Doukhobor farms were neat and attractive. The occupants planted trees, whitewashed their houses, and cultivated excellent gardens. They had no private property; land, houses, animals and equipment belonged to the community. There were stubborn elements among the Doukhobors and these balked when the authorities tried to Canadianize them. Trouble arose over school laws, and school fires occurred in Doukhobor districts in Saskatchewan and British Columbia. Finally, as many of the younger people broke away and divisions occurred, the original unity was lost.

The Hutterites, about whom the legislative chambers have heard a good deal, were relatively late in coming. The first group of seventy-two came from South Dakota to settle in three colonies near Elie, Manitoba, in 1918. By 1948 there were eighteen colonies in Manitoba and several others in Alberta. These were law-abiding citizens who led a communal and simple life. They took to power farming and produced efficiently. But they lived entirely to themselves and drew severe criticism for their indifference to social progress beyond their holdings.

It is probably true that the important problem of assimilating the people who thronged to Canadian shores received

less attention that it deserved. Thoughtful spectators could only hope that the heterogeneous mass of humanity, representing many tongues and cultures, would one day be united by democratic principles and Canadian ideals. For the most part, the original European settlers remained typical of their particular races; they were not converted quickly to Canadian customs. But except where the people clung to communal colonies, the second and succeeding generations Canadianized readily.

Another serious error was made; there was laxity in permitting wholesale occupation of untested western land. The agricultural resources of the West, the rainfall, nature of the soil, and topography were not measured until after many costly mistakes had been made in settlement. Mistakes of other kinds were made also. But optimism and confidence were the key-notes of a country rapidly growing into nationhood, and when the unparalleled rate of occupation is considered, the great wonder is that mistakes were so few.

EXTRACTS FROM DIARY OF ROBERT HOLTBY

March 30/03

After three months of planning, struggling, squabbling and working, we are off. The Canadian Idea was father's. He came home from Hull one night with a bundle of papers he had been lent on the subject and was full of it. A Mr. Trotter had been talking to him, trying to persuade him to go out. For a few years, father has wanted to get away from the worry and fuss of a commercial traveller's life and now he has got what he wanted. Of course when he talked about the advantages of Canada we all talked about its disadvantages till he got wild and said we were trying to damp him. . . . But after a few weeks thinking and turning it over and reading about it, I came to think it would be a very good thing for all of us. So I consented, very much to Mother's surprise, I believe, to come out. . . . From the hour of deciding to go to this the 30th of March, we have scarcely had a moment's peace. . . . Father and I both took up homesteads of 160 acres and I am glad to say I have saved up enough to pay for mine. (2/2/0)

March 31

By 8.30 we are on the landing stage [at Liverpool] and find that we are not first by about a thousand. Already there are three of the great Liverpool lorries filled with baggage of all sorts and conditions, all labelled "St. John, N.B." Out in the Mersey is the "Lake Manitoba" the boat that is to take us across the Atlantic. . . . We occupied the time walking up and down looking at our fellow passengers. The thing which struck me most about the people was that there appeared to be very few farmers among them and the cockney twang strikes your ear at every turn. . . . About 3.45 we put off from the landing stage into the Mersey and our journey begins in earnest. As we watch the town of Liverpool gradually growing smaller in the distance, thoughts of Leeds and friends I have left there come crowding into my mind until I have to turn away.

April 2

On this date there was little to report except seasickness. When I did get dressed, I stood leaning against a pillar, too jolly ill for anything. This seasickness beats anything I have ever had. It takes all the life out of you and makes you wish they would come round and pitch you overboard. The smell of food you simply abhor . . . I thought I should die at every mealtime. . . . There are altogether about ninety dogs on board, all chained at the far end of the boat.

April 4

There was a Scotchman opposite me at breakfast who caused some amusement by putting salt on his porridge instead of sugar and by the way in which he argued that salt was better than sugar because it "didna tak all the taste out o' the meal."

April 5 (Sunday)

At 10.30 there was a service in the married quarters, Mr. Lloyd our future vicar presiding. It went off very well and Mr. Lloyd preached a very fair sermon. . . . Two fellows were doing the three card trick on deck and somebody went and told Mr. Barr. He came and played Hamlet with the two of them and said if he caught anyone taking money in that way, he would see that they did not homestead in his colony. . . . Some of the South African soldiers on board are very keen card players and gamblers which shows what it must have been like out there during the war.

April 11

Docked at St. John.

April 12

About 12 o'clock the first train load went. This consisted of men who were going to get off at Winnipeg and find work among the farmers round there.

April 13

We stopped at a station called Brownville and before the train was stopped the platform was covered with Britishers, stretching their legs. One of the party stretched them as far as the nearest hotel for a drop of Scotch. The same party is a capitalist from Durham and he has been drunk every night of the voyage. The last night while we were in harbour he was coming along the deck from the bar complaining that the ship rolled very much tonight.

April 17

At seven o'clock in the evening we arrive at Saskatoon and find that the second section have already got into their tents and have got their camp fires going.

April 18

After breakfast, father and I go to buy a wagon and implements and find that everything is very dear. The wagon which is the usual American style, smart looking but made of second rate stuff, cost us £16. . . . The prices of horses and oxen are enormous. . . . During the waiting I have a good opportunity to become better acquainted with Saskatoon. It is a peculiar looking place dumped down facing the railway line. All the buildings but one are of wood and all have a new look. The one exception to the wooden rule is the Windsor Hotel which is built of stone. Where they got the stone from and how they got it up is a mystery. . . . Canadian pubs are also peculiar. Whenever you pass, their windows are full of men drinking, smoking cigars and chewing tobacco—some doing all three at once I believe. As soon as a train comes into the station all leave these seats and go to see the sight. This is the only bit of excitement they get during the day. . . .

After lounging about for a day or two we hear of a car load of horses which Mr. Barr has had sent up and we promptly go and inspect them and the result is that we buy two chestnuts for 375 dollars. . . . We next go down to the harness man to get them fitted and find that he will not have any harness ready for three days so that we are still further delayed.

April 28

Finally after wasting nearly a fortnight at Saskatoon we start our trek westward of 220 miles. [The first night on the trail found the travellers ready to make camp beside one of the large marquees that the government had set up at intervals along the trail.] During the night there is a crash and a sound of tearing linen. We go outside and find that it [a loose horse] had passed between our tent and the one next to ours and had caught its shoe in the ropes of the other tent, fallen nearly on the occupants thereof and tore their tent past mending. We finally caught the horse again and tied him up securely.

April 29

We are up about six and find that there has been a keen frost and a slight fall of snow. . . . After breakfast we have to roll the beds and blankets up, take tent down and load up and then comes the job, harnessing. The Canadian harness is so different from the English that we are a bit puzzled. There is a Canadian on hand to show us so we get on the road about 10 o'clock. . . . The road is getting much worse, hilly, rough and sloughy. As we go on we keep coming up to people stuck in the sloughs and after stopping to help we push on.

April 30

We came across a peculiar little post box, just a square box with a lid, fastened on a pole. We lifted the lid and looked in and there were 4 letters. This just shows how they trust people here. After passing over a lovely plain we came to a village in a valley and found that it was a Doukhobour settlement. These Doukhobours are a Russian religious body like the Puritans in England and have left their native country because of the persecution they have been subjected to. . . . They have got on very well and have the most up to date machinery, etc., although 2 years ago they took it into their heads that they had got to the Garden of Eden and therefore all work must cease. So they turned all their horses onto the prairie and for the whole year they lived on the fruits of the earth that had not to be worked for. . . . Among their other ideas was that they had to go without clothes because they were in the Garden of Eden. But the Government stepped in here again and obliged them to dress. This sounds like a fairy tale but it is true.

May 1

About 12 o'clock we came to a terrible place, Eagle Creek it was called. It looked to me as though at sometime there had been a tremendous earthquake. There was a drop of about 100 feet and the road was the steepest I have ever seen. Luckily the road down was very sandy and the wheels sank in which held the wagon back a good deal and we arrived at the bottom safely. . . .

May 2

This was Saturday and we were going to make the next Government Tent to stay over Sunday, a distance of 25 miles. I could not help thinking as we trudged on mile after mile of the cricket fields at home and the happy time some people would be having. Even the longest of days has its end and we reached the Government Tent at about 7 o'clock in a drenching rain.

May 3

Sunday—nobody broke camp.

May 4

Off at 8 o'clock, decided to make Battleford . . . a distance of 30 miles. . . . It was 8.30 before we reached Battleford. The horses looked fit to drop.

May 5

I rather like the place [Battleford]. It has a better look than Saskatoon. . . . I can't help thinking that this will be a big place in a few years. Situated as it is at the confluence of two great rivers and on the main line of the railway which is in course of construction. There are a number of people who are not going up to the land set apart for Barr Colonists but who are going to homestead near to Battleford. We are going through as all the good land is taken up round here except that which will be about 10 miles from the railway, when it comes.

May 7

We only get about 7 miles [from Battleford] . . . and then camp.

May 8

Made about 16 miles.

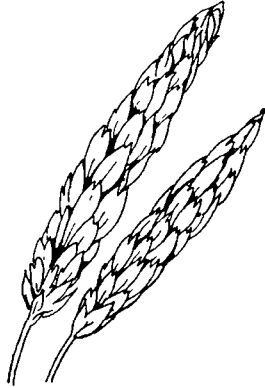
May 9

[While resting a fatigued horse, the writer made the acquaintance of a local farmer who was established in a big way.] This man is the last farmer on our way up. He has got a grand place, a house as big as a villa and lots of stables. He employs about a dozen farm hands and has a threshing machine of his own. He has a large herd of both horses and cattle and he must have nearly a hundred pigs running round. He has some turkeys, a thing I have not seen in Canada except there.

May 10

There was one man that we got quite sick of helping. He had a yoke of oxen and a very big load. These oxen had a habit of stopping to drink right in the middle of a slough and no matter how many buckets of water he carried to them before attempting to cross, they were always thirsty in the middle. When once this man got stuck he gave himself up for lost instead of cutting a nice stout sapling and whacking the bullocks till they. . . .

6 *King Wheat*



No more sudden and striking development has occurred in agricultural history than the establishment of the Canadian wheat economy in the years between 1876 and 1915. For centuries the Northwest had waited, despised and rejected by agriculturists, a hunters' paradise, a fur traders' empire, but too cold, too dry, too generally inhospitable to encourage the sower or the herdsman. Yet good soil was there, the best, by and large, in the future Dominion of Canada, much of it old lake bottom enriched by vegetation which had rotted back into it and secure from leaching by heavy rains. The challenge was too harsh for the Indian in his primitive stone-age state and for a while it looked as though it might be too harsh even for the tool-bearing and machine-minded western European. But the buffalo were swept from the plains and the nomad hunters were brought under the rule of law and within the orderly fences of civilization. The railways that brought in the avalanche of settlers were available to carry their harvests to the markets of the world. And by that time, thanks to the courage and pertinacity of the Red River settlers, the wheat they must harvest was there to be sown.

It had been a long and hard struggle, and many of the hardships in the Selkirk saga caused by losses from early frosts, insects, floods, mice, drought, and rust, will never be recorded.

During the first fifteen years the settlers lost one crop from inexperience, two from disorganization growing out of conflict, at least two from early frost, three from grasshoppers, and one from mice. Floods caused heavy crop losses not only in 1826, but also in 1852 and 1861.

Weeds are as ancient as agriculture and have been a perpetual source of loss. Those weeds about which the Selkirk settlers complained were probably native plants which had not been eradicated when the land was broken. More serious, however, were the vigorous species introduced in imported seed grains. Russian thistles, which are abundant in the semi-arid areas of the West, afford an example of how quickly an imported sort can become a menace. This weed was introduced in flax seed imported from Russia to South Dakota in 1873.

The capriciousness of prairie weather has never ceased to amaze newcomers. When a visitor enquired about "an average year" in Saskatchewan, his pioneer listener said, "I've been 55 years on these prairies and I haven't seen an average year yet." Only those with long experience knew how many forms of crop hazards nature carried in its bag of tricks. But in his first report for the Indian Head experimental farm, Angus MacKay mentioned drought, high winds, and early frosts, as the main obstacles to agricultural success.

Red River escaped the severe droughts which occurred on the prairies where an admixture of wet and dry years indicated that such a variation could be considered normal. But what the settlers had to learn by experience was that, as in the Egypt of Moses, wet years of plenty can be expected to alternate with dry years of scarcity. They could not interpret these great variations as indications of climatic shifts. After two or three wet years the livery-stable weather prophet would remark, "The climate is changing; it's getting wetter every year."

During the "dry eighties," on the other hand, Easterners would say, "The West is like the balky horse we got from the gypsies, a bad bargain," and Westerners would shake their heads and talk about deserts and giving the country back to the Indians. But both were wrong. There has been a slight increase in mean temperature because of cultivation and the exposure of a tilled surface, but if other climatic changes are in progress, they are too minute to be detected by casual observers. Nothing is more futile than attempting to forecast next year's rainfall or next year's crop. The only safe forecast is that the next hundred years will have approximately the same proportion of wet and dry seasons as the last.

Annual precipitation over the western wheat belt averages about 16 inches. Rainfall records go back to 1872 at Winnipeg, 1884 at Qu'Appelle, 1886 at Swift Current, 1883 at Edmonton, 1884 at Medicine Hat, and 1885 at Calgary. For an idea about weather prior to those dates, one must look to the imperfect records of traders, explorers, and travellers.

David William Harmon of the North West Company, in his diary entry for June 1, 1805, mentions low water in the Assiniboine, "arising from the fact that we have had no rain this spring. . . ." It would seem that Palliser's explorations coincided with a drought period, and that dry years accounted for navigation troubles on the Mississippi and Red Rivers in the middle sixties. But change is the order in the West and some students believe that the seventies may have been the wettest decade in a hundred years.

Although precipitation was good in the seventies, other conditions were less favourable, for it was during this decade that insects made perhaps their greatest inroads in Red River history. Grasshoppers had first appeared in 1818 and extended their stay to three years. Palliser had seen the pests in abundance during his first two years in the West. But between 1868 and 1875, hopper damage was serious every year. Garden stuff as well as crops was consumed in 1868 and 1869, and had it not been for generous relief from the outside, suffering would have

been great. Chemical control was unknown, but so many of the hoppers crash-landed against the walls of Old Fort Garry that it was considered necessary as a sanitary measure to rake the putrefying piles together to be burned or hauled away. The western provinces have experienced grasshoppers in menacing numbers often enough since then (\$30,000,000 was the estimated loss in Saskatchewan in 1938), but new and better methods of control have come with the passing years.

Oddly enough, the grasshoppers were indirectly responsible for a tremendously important change in western wheat. It did not at first bring any greater security to the farmers but it did establish the quality of their product in world markets to an extent which rendered their risks more worthwhile. This change took place in 1875 after eight years of grasshoppers.

The year 1876 should be far more important to the Canadian school population than the year in which Guy Fawkes plotted to blow up the British Houses of Parliament, or the dates of any of King Henry VIII's marriages. It was the year when the Custer Massacre in Montana induced the Sioux Indians under Sitting Bull to cross into Canada. It was the year in which the Honourable David Laird was appointed first Lieutenant-Governor of the Northwest Territories. It was the natal year for ranching in Canada's Chinook belt, and during the summer of 1876 an ox-team hauled a steam-driven grist mill from Winnipeg to the settlement at Prince Albert. But the event of uppermost historical significance was the movement of a small shipment of seed wheat placed on a Red River steamboat at Fort Garry and routed by Duluth and the Great Lakes to Toronto.

The purchasers, Higgins and Young, "Importers of Boots and Shoes, Crockery and Glassware," had been commissioned to buy 5,000 bushels of western wheat for the Toronto seed firm of Steele Brothers. The price was 85 cents per bushel. Nobody objected to that, but Western Canada didn't have 5,000 bushels of wheat to sell. The Importers of Boots and Shoes did the best they could and bought 857½ bushels. The

little cargo left Winnipeg on October 21, and arrived at Toronto November 28.

It was the first wheat to leave the new West and it was good wheat. In that particular period marked advancement was being made in the technique of milling. New methods permitted more complete separation of bran particles from flour and thus a whiter flour. New emphasis was put upon quality and this had already served to focus attention upon the superiority of the western product, rich in gluten and valuable for blending with softer wheats in making bread flour.

The pioneer shipment created a bigger stir in Toronto than it did in Manitoba. The experts there asked: "What's this?" "Where did it come from?" "Is there more like it?" But there was a little stir in Manitoba also. Winnipeg had literally sold itself short of wheat and T. B. Miller, a recent arrival at Portage la Prairie, began at once to buy the few bags of surplus available in that district and ship these by flat-bottomed boat to Winnipeg. Things were beginning to hum. Wheat was the thing. Wheat was monarch of all. This monarch was Red Fife, and through a quarter century his supremacy was unchallenged.

The first wheats with which the Selkirk people had struggled were soft kinds like White Russian and club. The Prairie du Chien wheat, introduced in 1820, dominated, and there was an importation of "Black Sea" wheat from England in 1850. These were easy victims of smut, they were late in maturing, and they did not suit the personality of the new soil. Western Canada would never have become the world's bread-basket with these wheats. But the hand-to-mouth life of subsistence for farmers was too arduous to leave much energy for planning and the stoical settlers accepted their crop losses as inevitable.

Then fate intervened, although in a form which nobody at first recognized as a blessing. The grasshoppers were so numerous from 1868 to 1875 that some people believed they had become permanent colonists, and that field crops would never

again be grown successfully. At the end of 1875 there was not enough wheat in sight for seed, and a committee from Red River colony travelled deep into United States territory by ox-drawn sleighs and returned with a new kind of wheat. Well did the patient plodders beside the plodding oxen realize that their fellow settlers would hesitate before accepting a new variety, but they had not the faintest idea of what that new variety would mean, nor that it might be the turning-point in the agricultural history of the Northwest.

The new wheat was a good yielder. It was hard; it had a rich, red colour; it possessed the highest bread-making qualities. It was to bring fame to the Northwest. It was Red Fife wheat, which was destined to spread like prairie fire across the buffalo country and become a parent or grandparent of the improved varieties to follow.

This wheat had a humble beginning, with David Fife, Scottish settler in Peterborough County, Ontario, about 1820. He was anxious to obtain a better class of wheat for his district. Naturally supposing that all good things came from Scotland, he sent to his native land for seed. The imported stuff was planted but the result was disappointing. With characteristic stubbornness, he tried again, this time writing to a clerical friend in the city of Glasgow.

The Glasgow man was anxious to help. As he strolled at the quay one afternoon, he learned that a boatload of European wheat had docked. Inspection proved that it was good wheat, but how was he to obtain a handful for Fife? Outwardly, his interest was strictly academic, but that didn't prevent his hat from falling in upon the wheat. A man has a perfect right to try and recover lost clothing, and in his struggle to capture his hat some seeds may easily become trapped under the lining. That night, in a Glasgow home, a few kernels of wheat were placed in an envelope, and addressed to Canada.

Fife received the seed in time for spring planting in 1841. Again his spirit soared, and again it fell when he looked upon the small heads. But lo, one seed had produced something

quite different. This seedling had stooled well to give five superior heads. Fife watched the quintuplet-headed plant with a father's hope. But the path of the wheat-grower is studded with pitfalls and before the wheat was quite mature, Fife's ox broke through the fence and was grazing on the wheat when discovered.

Four of the five promising heads were devoured, but one remained. The seed from this sole survivor received the most tender care and a year later it yielded a pint. Immediately there was local demand for the new strain. The wheat was red, as was Fife's complexion, and it became known as Red Fife.

The fame of Red Fife spread as rapidly as supplies of seed would permit and it followed the spring wheat areas into the central United States and from there to Western Canada. It was this wheat that was shipped east in 1876. Although it was slow-ripening and thus in constant danger from early frost, the prairies otherwise afforded it a very congenial home, and through this wheat the pre-eminence of the Northwest was established in the markets of Eastern Canada and of the world.

The value of wheat grown on the rich soil and in the hot dry weather of Manitoba was beginning to be known even before 1876 or the founder of Steele, Briggs Seed Company would not have turned to it when Ontario crops appeared to be falling off because of poor seed. The heaviest samples weighed 66 pounds a bushel as compared with 65 for the heaviest American wheat, and as soon as Winnipeg got rail connection with Minneapolis, American buyers began to import it at top prices. The first shipment to Glasgow went in 1878; to Liverpool, in 1879. By 1883, when the C.P.R. was ready to begin eastward grain shipments from Winnipeg, there was a good demand for all that could be spared, and about a million and a half bushels were handled in the first year. These went by train and boat; it was another two years before the all-rail route from Winnipeg to Montreal was completed.

The suitability of Red Fife for western soil was recognized quickly. In 1883 the prizes offered by the Provincial Exhibition

and Seed Fairs in Manitoba were restricted to Red Fife wheat. The Manitoba government began bringing pure Red Fife seed to the province and distributing it to farmers. At the same time the Canadian Pacific Railway was establishing demonstration farms along its course and transporting superior seed without charge. Consequently the wheat that was taken into the Territories for seed was almost exclusively of the new variety, and on the basis of Red Fife, the first western Canadian wheat grading system, soon to become world-famous, was set up.

From the beginning western wheat was sold by grade rather than by sample. The system had been started in the United States, but so much American grain was sold for home consumption that it never assumed the importance there that it soon won in Canada where the export trade was paramount. By the turn of the century No. 1 Manitoba Hard and No. 1 Manitoba Northern were synonymous with the finest bread-flour grain in world markets, and "Manitoba" had become such a trade name abroad that it was retained long after Saskatchewan and Alberta yields surpassed that of the older province.

The system of grading today is quite complicated. Straight grade wheat of the highest quality must be dry, reasonably free from weeds or admixtures of other grains, clean, sound, and well matured; it must be of a minimum weight to the measured bushel, and have a high percentage of hard vitreous kernels. Originally, at least 75 per cent. had to be Red Fife. The higher grades are established by statute, with commercial and off grades being adjusted from year to year according to conditions by the Grain Standards Committee. A system of sampling, inspection, and weighing has been elaborated to ensure that all shipments come up to the prescribed standards and official samples for that year's crop. D. A. MacGibbon, in *The Canadian Grain Trade*, quotes a French buyer to the effect that the regularity of the quality of Canadian wheat delivered in fulfillment of contracts based on the "Canadian

certificate final" was one of Canada's greatest advantages in marketing her wheat.

As railways and branch lines tapped the wheat country, loading platforms, followed by grain elevators, were constructed at almost every stop. Often there were more elevators than houses, and the elevators became a characteristic feature of western towns and villages. By 1916, there were 3,287 elevators at country points in the midwestern provinces, the average capacity being about 30,000 bushels. Moving wheat was a major part of railway work. Huge terminal elevators holding millions of bushels were erected at the head of the Great Lakes and at seaboard points to accommodate the fruit from the western grain fields.

From the beginning this was big business for Canada, and the railways co-operated by setting up highly specialized facilities for handling large quantities of grain by assembly line methods. To provide sufficient terminal facilities and country elevators to handle the crop became a race with time. A bottleneck anywhere meant that grain had to winter west of the lakes and await spring delivery, often at considerable inconvenience and loss. Today, railway preparations for moving the Canadian grain crop begin months in advance. Some 60 per cent. of the cars owned by Canadian companies cannot be used except during the grain season, and then almost overnight every car they can put into service is required. In the old days farmers used to secure cars by whatever means they could, including bribery and cajolery of train crews, and a sort of peaceable hijacking, but legal regulation of the grain trade began very early, and in 1900 the Manitoba Grain Act ordered the establishment of what is called the Car Order Book to ensure fair distribution of what cars were available. Elevator procedure, freight rates, and other phases of the transportation problem have also been governed by legislation from early times, as early times go in the Northwest grain trade. Storage and handling facilities and rail transportation are supple-

mented by the Great Lakes freighters. These huge metal troughs would break up at once on the ocean, but wriggle comfortably enough along the Great Lakes, monstrous sea-serpents, with their quarters serving as the tiny head and the engines in the equally insignificant tail. Ocean-going vessels carry the grain from Atlantic and Pacific ports, and more recently from Port Churchill as well, to all parts of the world.

The enthronement of Red Fife wheat in the seventies and early eighties did not mean that the difficulties of western farmers were at an end nor that the new sovereign would reign undisturbed. Early autumn frosts were long considered to be the particular curse of wheat growers on the frontier. Even in the eighties, losses from unseasonable frosts were heavy, especially in 1884, 1885, and 1888. And there seemed to be no way round the problem. Settlers tried smoke from smudges when temperatures hovered close to freezing but it was of no avail except to drive a few persistent mosquitoes to cover. When Angus MacKay of Indian Head had frozen wheat which proved unsaleable in 1884, he decided to convert it to flour in the mill installed that year at the Bell farm. But the flour was no easier to sell than the wheat and when he shipped a carload of it to Montreal, he was poorer by eight dollars than he would have been had he donated the wheat to the local Indians. Not until modern scientific study evolved new varieties of wheat was this danger of early frost somewhat mitigated.

Very dry years occurred in the eighties and nineties and a number of large-scale farming enterprises were ruined by crop failures. Drought did much to cripple the Bell farm at Indian Head and the Sir John Lister Kaye farming enterprise. Sir John's company introduced the first water development on the prairies by attempting to irrigate the grain crops by means of field sprinklers drawn on two-wheeled carts; needless to say, that scheme had a short life.

It was during the dry eighties that the advantage of summerfallowing was discovered, rather by accident. Moses in-

structed the Children of Israel that their land should lie idle one year in seven, and records indicate that the early Romans recognized the value of giving the land a rest. But in Western Canada the practice was not rediscovered until the year of the Northwest Rebellion. At that time an urgent call came for men and teams to do freighting, and Angus MacKay released nearly all of his farm horses for war service. Most of MacKay's land was not seeded that spring of 1885; only enough horses remained to keep the weeds down. The spring of 1886 opened dry, and drought continued into the summer. Stubble crops round about were a failure, but wheat on the MacKay land, which had been fallow the year before, gave a harvest of 23 bushels per acre. Homesteaders in buggies, in wagons, and on horseback came miles to see that crop, and summerfallowing became standard practice in the dry belt.

People tried to work out clock-like cycles of wet and dry years but nature refused to follow the cycles. In the midst of a dry period came a year of heavy rains like 1888 when, according to Seager Wheeler at Moose Jaw, "Many of the settlers, having had one big crop, retired and moved to Regina." The next bumper crop was in 1891. They called it the "honeymoon year." When the crop was harvested, innumerable settlers journeyed home to the East or overseas and returned with wives.

But drought ruled in 1892, 1893, and 1894 and many prairie farms were abandoned. In some districts 50 per cent. of the settlers removed the barbed wire from their fences and left. Again they said, "The West is drying up." Again pessimism reigned. "Was Palliser right in his appraisal of the prairies?" "Was the C.P.R. a foolish investment?" With the turn of the century came a number of favourable years and the lean years were forgotten. Prairie wheat yield in 1901 averaged 25 bushels to the acre. This record was not bettered until the famous crop of 1915. In the early part of this latter season the newspapers talked about drought and failure but when the crop was

threshed in the fall, the wheat average in Alberta was 31.1 bushels, in Saskatchewan 25.1 bushels, and in Manitoba 24.8 bushels. And the drought and hardship of the thirties were followed by the biggest yields in the history of the West.

King Wheat's reign has not been untroubled. Even today, with the best modern scientific methods, and with all sorts of new varieties that are early-ripening, rust-resistant, and pest-resistant, harvests are not always good. But from the first appearance of Manitoba hard wheat upon the markets of the world its high quality was apparent, and innumerable championships in international contests left no doubt about its superiority. Critics said it was purely accidental when Manitoba Red Fife wheat won top honours at an exhibition at Antwerp in 1885. But it didn't seem so much like an accident when a sample grown near Peace River Crossing won first prize at the Columbia Exposition at Chicago in 1893, and the "best 80 bushels" at the Pan-American Exposition in 1901 was a Manitoba entry.

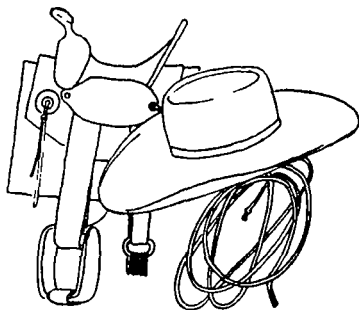
The more recent triumphs by western exhibits at international competitions should convince everybody. Here is the record of recognized international wheat championships won by Western Canada:

Seager Wheeler, Saskatchewan, 1911, 1914, 1915, 1916, 1918
Henry Holmes, Saskatchewan, 1912
Paul Gerlach, Saskatchewan, 1913
Samuel Larcombe, Manitoba, 1917
J. C. Mitchell, Saskatchewan, 1919, 1920, 1924
R. O. Wyler, Saskatchewan, 1922
Major H. G. L. Strange, Alberta, 1923
Jos. H. B. Smith, Alberta, 1929
Frank Isaackson, Saskatchewan, 1933
J. B. Allsop, Alberta, 1934, 1947, 1948
W. Frelan Wilford, Alberta, 1935
Herman Trelle, Alberta, 1926, 1930, 1931, 1932, 1936

Gordon Gibson, British Columbia, 1937
Lloyd Rigby, Alberta, 1938, 1939, 1940
William Miller, Alberta, 1941
Mrs. Amy Kelsey, British Columbia, 1946, 1949
R. P. Robbins, Saskatchewan, 1950

The wheat which won those international honours was grown over an area extending far beyond the line once thought to mark the northern limit of cultivation. Nine world championships for wheat was the record for the farms around the little town of Wembley in Peace River District. Perhaps the northern limit of cultivation is where the soil ends.

7 *The Cattle Kingdom*



RANCHLAND traditions were inherited from the south. The stock-saddle, and all that went with it, followed the ranch herds north from Texas, across Montana, and over the border into Canada. The inheritance was Spanish but it became as typically western as buckbrush.

The earliest explorers saw buffalo in abundance but no cattle. The latter were not native. But it is told that Columbus, who wanted to establish a colony in the West Indies, carried Spanish cattle on his second voyage in 1493. When taken to the mainland, the Spanish cattle increased rapidly and many went wild on the grassy plains of what are now Florida, Mexico, and Texas. These were the forbears of the rangy, slow-maturing, thin-loined, narrow-bodied cattle later known as Texas Longhorns—long in horn and long in bad temper, but short in beef. Spanish priests estimated the wild cattle in southern Texas in 1833 at more than a quarter of a million.

The Texan Republic declared the wild cattle to be public property, and in the early forties well-beaten cattle trails led to the markets of New Orleans, Galveston, and Mobile. Longer drives followed—to Chicago and to Abilene, Kansas, which in 1867, on the coming of the railroad, sprang into prominence as

a cattle metropolis with the suddenness and glamour of a gold rush. Thirty-five thousand head of cattle were loaded out of Abilene that year; 350,000 went out in 1869 and 700,000 in 1871. Then business began to shift to other Kansas points and by 1876, Dodge City could claim to be the "cowboy capital of the world." Trailing southern cattle continued until 1887 when it was estimated that not less than seven million head had been shipped from that point alone in the preceding 15 years.

Through all these years of trailing, the cattle business was shifting northward. Unfinished cattle and those not wanted by the market were turned off the trail to graze and thus the more northerly grass was put to test. At first men were surprised that cattle could winter out on those northern ranges, and winter well. Finally they concluded that cattle would probably thrive in any part of the buffalo country. When Dodge City became the principal marketing point, therefore, many of the females and young steers were sold to stock ranges farther north. By every test the northern grass was good and the Texas-bred cattle were actually growing to bigger size and finishing better than they were expected to do south of the Rio Grande.

Nelson Storey drove 3,000 cattle from Texas to Bozeman, Montana, in 1866 but these were for slaughter in the mining camps. A breeding herd was taken to the Sun River area in 1871. At first, forays of hunger-crazed Indians were a terrific obstacle to ranch expansion in Montana and Wyoming, but by 1877 and 1878, when the Indians were under control, there was a notable rush to obtain squatter's rights on the best land and establish claim to waterholes. A hundred thousand Texas cows found their way to Montana in 1879.

Large-scale cattle companies, financed by Eastern, Scottish, and English capital, were a feature of the next few years, both north and south. Frequently these were directed from an office in New York or Edinburgh or some equally remote metropolis. Scottish companies were especially numerous. Among the prominent Scottish and English companies were the Swan, Prairie, Matador, Texas, Hansford, Arkansas, Powder River, Pastoral,

and Western Land. At their peak, about 1885, the Prairie Cattle Company and the Swan Land and Cattle Company had as many as 120,000 cattle each. But the "XIT," the Matador, and the King were the largest and best known. The "XIT" or Capitol Syndicate, operated from Chicago, carried 160,000 head, and branded calf crops numbering up to 35,000.

The first drives into Canada were made to feed the gold-miners of the Fraser and Caribou, and F. W. Laing¹ suggests that over 22,000 head of cattle were driven into British Columbia between 1859 and 1870. Many of the cattle of the 1862 drives were bought by H. O. Bowes, who had a stopping place on the river trail at Alkali Lake. Bowes found himself with more cattle than the trade would take and turned the surplus loose. They grew fat and came through the ensuing winter in good order, as anyone who has known the Alkali Lake Ranch of recent years and has seen its fine grass would expect. But the real founders of ranching in the inter-mountain country were the Harper brothers, Jerome and Thaddeus. They chose a ranch site still known as the Harper Ranch, a few miles east of Kamloops on the South Thompson. The Harper brand, **H** combining Jerome Harper's initials, is the oldest registered cattle brand in British Columbia and is in use at the time of writing. After the beef market at the mines fell away, Thaddeus Harper drove 1,200 head into northern Idaho, summered them there, and a year and a half after leaving the home ranges brought them into the markets of San Francisco rolling in fat after crossing five states and travelling not less than 2,000 miles, most of which was mountainous and wild. It was roughly the equivalent of starting a big herd at Calgary, driving over unmarked country, mountainous country, Indian country, and dry spots, and ending in the suburbs of the city of Toronto.

Although Canadian cattle ranching thus started in the inter-mountain ranges of British Columbia, the Great Architect seemed to have marked the Chinook belt especially for cattle

¹"Some Pioneers of the Cattle Industry," *British Columbia Historical Quarterly*, October, 1942.

and sheep. It always had a unique quality. Its climate was different; its grass was different; its Indians were different. But the real merits of the area were not established quickly and not until two years after Winnipeg was incorporated as a city were the first cattle released in what is now southern Alberta.

For long years that southwestern area was avoided rather carefully by traders and travellers. It was reputed to have very few furs, and moreover, it was Blackfoot Indian country. But the buffalo were good judges of pasture and preferred the nutritious, short-growing grass of the plains to the relatively lush growth in the Park Belt. Palliser and Macoun recognized that what the prairie grass lacked in quantity it made up in quality. Nor was this its only advantage; it tended to cure on the ground and remain palatable and nutritious through winter months, thus making winter grazing possible where the Chinook winds cleared away the snow.

"Chinook" suggests cowboys and roundups just as "Broadway" suggests dancing-girls and bright lights. In the West, the name is considered suitable for anything from race tracks to bottled beer and from steamboats to babies. Only those who have experienced a western winter can appreciate a western thaw, or understand the nostalgia roused by a mention of these balmy winds. Their name comes from the Indians of the lower Columbia River, from whose direction they were observed to blow. As these winds are forced upward to pass over the mountains, the reduced atmospheric pressure causes them to expand, cool, and lose their moisture as rain or snow. During their descent on the opposite side of the mountains, the pressure, increasing with the lower altitude, causes a corresponding rise in temperature, so that when they pass over southern Alberta they are dry as well as warm. Thus they not only melt the snow but suck away the moisture.

Indian legend furnished another explanation, one more romantic than scientific. Chinook was an Indian beauty who wandered into the mountains in dead of winter and became lost. When a pretty girl goes mountain climbing, she doesn't

have to travel alone and Chinook paid a heavy penalty for her rash independence. Young braves hunted diligently for the lost girl and old men found it easy to be heroic when they thought about Chinook, but finally they gave up and the young squaw was presumed to be dead. Then, before the period of mourning had passed, a warm and kindly wind swept down from the peaks and took away the snow. Said her admirers, "It is the gentle breath of the lost Chinook."

The warm and "gentle breath of the lost Chinook," is a frequent visitor over the foothills and plains. It comes unheralded when winter covers the prairies with snow and drives the herds to shelter in breaks or coulees. An hour may produce a temperature change of 50 degrees and cause a moderate covering of snow to disappear. Snow two feet deep has been known to vanish overnight. This means that cattle can find food in the Chinook country for most of the winter.

It was not, however, until after Blackfoot Treaty No. 7, last of the major Indian treaties, was signed in 1877, that foothills ranching began as an experiment in the great grassy plains which blended with the green-blanketed foothills.

John McDougall, the prairie missionary, and his brother David, who made his living by trading and his reputation by telling tall tales, may have been the first ranchland cattle men. The McDougalls were at Morley a year before the Mounted Police built Fort Macleod. They took twelve head of cattle with them from Fort Edmonton and then added fifty horses; next year they drove another small herd of cattle up from Montana. The arrival of the North West Mounted Police was the next step. The police brought in some cattle themselves. More important, they provided an accessible market. And perhaps most important of all, several of their members retired to found important ranches.

At their post on Old Man River, the police had some oxen for freighting and some cows for milk, but they were not ready to produce all the meat, butter, and vegetables which they required. The market thus created attracted enterprising people

who squatted close to police headquarters. The I. G. Baker Co., a mercantile firm operating a store at Fort Benton and trading posts in various parts of the Indian country, brought a herd of cattle from Montana to slaughter for police beef. In 1874, on Rev. John McDougall's advice, a party of inter-mountain cattle drovers, moving a herd of 400 head, herded them for the winter along the Bow River and in the spring drove them north towards Fort Edmonton. And in the following year, Henry Olson and Joseph McFarlane brought milking cattle to a farm close to Fort Macleod and sold butter to the police and Indian agents at 75 cents a pound.

Still none had tried turning cattle loose on the broad prairies. First, given freedom, they might decide to fraternize with the buffalo and drift away with migrating herds. Secondly, the Indians had not heard about free enterprise and refused to understand the meaning of private ownership; a hungry Indian could see no reason for making a technical distinction between buffalo meat and cow meat and would shoot one animal down as readily as another.

Sergeant Whitney¹ of the North West Mounted Police first tried the great experiment. He did so in 1876, the same year in which the first seed wheat was shipped from the new West. John B. Smith of Sun River, Montana, drove a bull and fourteen cows, with some calves, to Macleod and sold the total of twenty-five head to Whitney. Whitney didn't have the feed necessary to winter the cattle and turned them loose in the fall. Onlookers said, "You'll never see hide or hair of them again." But in the spring, when two riders went out to see if some trace could be found, lo, a miracle! After two days, they were back with the cattle. The entire herd had survived the hazards presented by Indians, buffalo, an unfenced range, storms, and lack of shelter. This "roundup" was actually the first cattle gathering on the prairies and marked the birth of an industry.

¹Sub-constable Robert Whitney (Reg. No. 102) served in the N.W.M.P. from May 25, 1875 to May 1, 1877. Anxious to go ranching, he accepted discharge by providing a substitute.

Nothing is more contagious than a good idea, especially if it leads to profit. The I. G. Baker Company began branding the cattle brought in for meat and allowing them to run at large until required for slaughter. Then Fred Kanouse, who had come into Alberta in 1871 as a very free trader, seeking an occupation which would be more acceptable to police than whisky trading and more profitable than panning gold in worked-over gravel, repeated the Whitney experiment. Just after the Blackfoot Treaty was signed Kanouse brought twenty-one cows and a bull from Montana and turned them out to wander as they chose between the Missouri River and the Peace. Every animal was accounted for next spring and every cow had a calf.

Tom Lynch and George Emerson became drovers. Emerson had been panning gold on the Saskatchewan and driving freight oxen for the Hudson's Bay Company. He and Lynch were more interested in selling than in breeding cattle. They began driving herds from Montana in 1876 and ultimately supplied foundation herds for several of the well-known ranchers, among them Ed Maunsell and his brother George.

Sub-constable Edward H. Maunsell (Reg. No. 380) was another of a good many Mounted Policemen who gravitated to ranching as soon as they qualified for discharge. Police work had brought them in touch with pioneer cattlemen and afforded them a good opportunity to study locations. In the spring of 1877, about thirty men left the force and located in the Macleod and Pincher Creek districts, on land grants obtained by scrip given for three years of service and good conduct. Ed Maunsell became the owner of the largest individual ranch holdings in the Macleod district.

The first bona fide roundup in which a number of owners participated was in 1879. Sixteen men took part, among them a number of active and retired police. Inspector Albert Shurtliff was there, also Inspector William Winder, Sergeant W. F. Parker, Constable Robert Patterson, ex-Constable John Miller, and ex-Constable Maunsell. The police force was becoming a

training ground for ranchers; soon others, like Colonel James Walker and ex-Sergeant David Cochrane (Reg. No. 22), turned to cattle and met with success.

When that first roundup was completed, it was concluded that hungry Indians had taken more cattle than the Canadian winter. Something had to be done to give relief to the natives and protection to the cattlemen. Pressure was exerted upon the Dominion Government and later in that year a herd numbering close to 1,000 head was driven from Montana and placed in the Porcupine Hills west of Macleod. The cattle were entrusted to herders employed by Colonel Macleod and the idea was to furnish beef as required to the Indians of Treaty No. 7. The herd was not well managed, but there was ample evidence that with good direction cattle would thrive in that section.

Frank Oliver of Edmonton was one of the prophets who could see big herds coming to stock the ranges. He wanted to stock the prairie grassland with herds from the British Columbia ranges. Cattle on the inter-mountain grass were numerous and almost valueless but he believed they were actually better cattle than those coming from Montana. In 1880, Oliver was advocating a government-made cattle trail from Kamloops to Bow River. The idea was as progressive as Frank Oliver himself, but nothing came of it and the cattle to seed the Chinook pastures continued to come from Montana, mostly from the Sun River country.

In 1881 the trickle of cattle from the south broke into a torrent. It heralded the appearance of the big ranching outfits and the cattle barons. The Canadian Pacific Railway had advanced as far west as Brandon; Winnipeg was at the peak of a real estate boom; the buffalo had disappeared; grass was abundant; and open range permitted unrestricted use of state property.

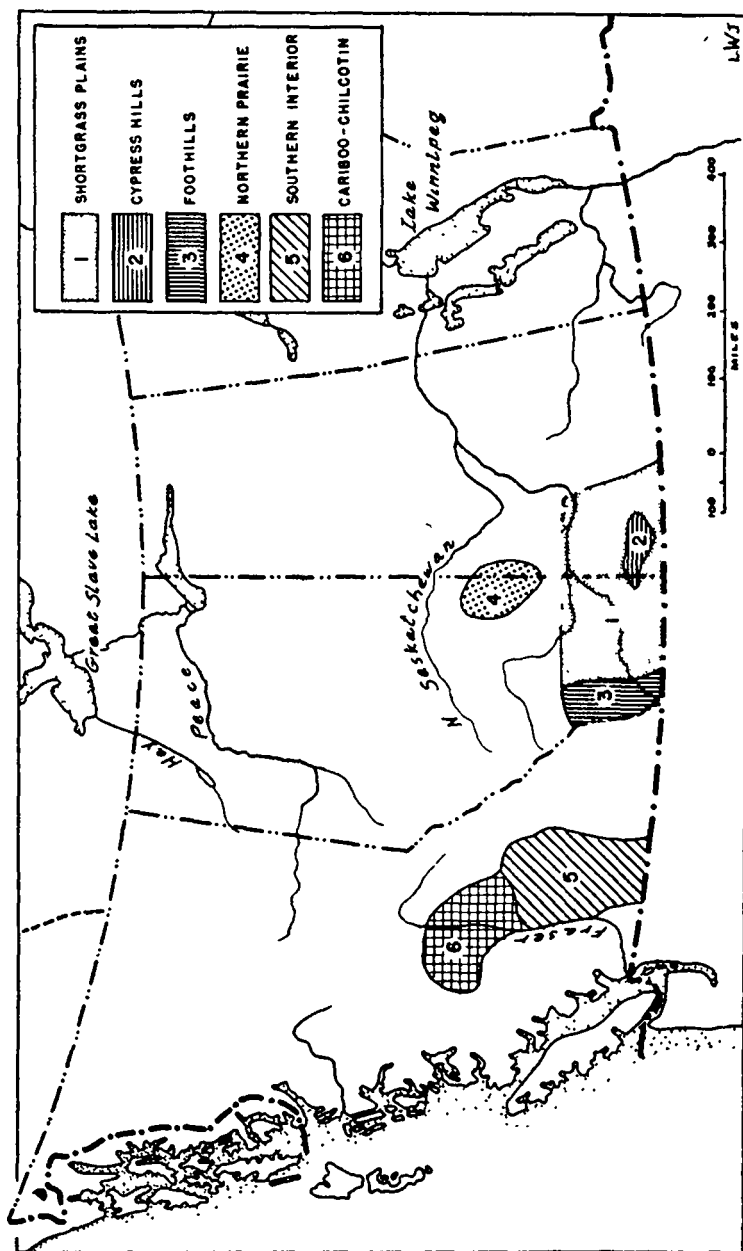
Although individual operators had no legal claim to the areas they were grazing, the "law of the range" decreed that the first ranchers on the land had prior claim. The Land Act of 1881 provided for 21-year leases on up to 100,000 acres per

lease at one cent per acre. According to the regulations, lessees were required to stock the ranches with one head of cattle per ten acres within three years. The folly of this was soon recognized, however, and the regulations were changed to require one head per twenty acres. The biggest inducement was that lessees might import cattle from the United States duty free.

"An Ordinance Respecting the Marking of Stock" was passed at the second session of the Council of the North-West Territories, meeting at Battleford on August 2, 1878. It represented the first move to institute brand recording on the prairies. By it the Lieutenant-Governor was given power to declare "stock districts," in which the office of the local stipendiary magistrate would become the Brand Recording Office, and the clerk in that office would act as Brand Recorder. It was to be the responsibility of the recorder, after consultation with an applicant cattleman, to designate the character or mark to be used and the position it would occupy on the animal's body. And always he must take care to avoid duplication.

Once recorded, no person except the registered owner could use the brand. No private property was so zealously guarded and where theft or misuse of a brand was established, there was never much sympathy for a light penalty. The Law of Moses stipulated that the cattle thief must "pay double unto his neighbour" for the cattle wrongfully acquired; but in the North West Territories they took a dimmer view of such crimes and considered that the person caught branding cattle other than his own should pay three times the value of the animals. And woe betide him if he were taken a second time misbranding or rustling.

"Stock District Number One," embracing the south part of the present Alberta and with its Record Office at Fort Macleod, was proclaimed by Lieutenant-Governor David Laird on November 21, 1878. The country was still without big herds, but small operators were displaying growing interest in the grass about Fort Macleod and that centre was showing the first indication of becoming the capital of the Canadian cattle kingdom.



RANCHING ZONES OF WESTERN CANADA

There were amendments to the brand regulations from time to time, some of them pertaining to the use and registration of the "vent" mark by which an owner could visibly quit his claim to branded cattle. A brand would not rub off and so there had to be some other means by which the original owner's claim was cancelled at the time of sale. The most common "vent" was a small edition of the owner's registered brand, applied upside down or in some unusual position above or below the original brand. Later, other special marks were sometimes adopted and registered for "venting."

Hon. M. H. Cochrane of Compton, Quebec, would have been "Man of the year" for 1881 if one had been named in the Chinook belt. He had the optimism, the nerve, and the money to establish the first big ranch on the Canadian prairies. He conducted his own reconnaissance, driving in from Fort Benton with a buckboard and a pair of broncos. He bought his first cattle in Montana and Frank Strong, foreman for the I. G. Baker Company, received the big herd of 3,000 animals at the boundary and superintended the drive to the Cochrane range west of Calgary, where Colonel James Walker,¹ a retired Mounted Policeman, was manager. Ranch headquarters were at Big Hill, close to the present site of the town of Cochrane, and the cattle could range from the point where Calgary is located clear to Morley, high in the foothills.

The drive north was made in record time but it proved a costly record because the cattle arrived in poor condition and were unprepared for the fall storms and the hard winter. To make matters worse, they were unbranded and many that strayed during the winter were not recovered. In the spring the Cochrane order was to brand everything and, to the alarm of settlers and embryonic ranchers who had a few cattle running at large, the Cochrane cowboys followed instructions literally

¹James Walker (1846-1936) was appointed superintendent and sub-inspector in the N.W.M.P. on March 30, 1874, and was a member of "D" Troop in the historic trek of '74. On February 1, 1881, Major Walker resigned to become manager of the Cochrane Ranch. When the first Great War broke out, he enlisted as a forestry expert. Sir Arthur Currie said, "He was a man who broke out every 50 years and went to war."

and branded everything in the roundup. In self-defence the neighbours also began branding "everything" that did not already have a mark, including, no doubt, many Cochrane cattle.

In spite of losses during the first winter, Cochrane's confidence was undiminished. He ordered Colonel Walker to buy more cattle. Montana purchases in the spring of 1882, along with calves, brought the total to 12,000 head, but losses in the second winter far exceeded those of the first. Colonel Walker resigned. Frank White became manager, and in a short time was succeeded by W. D. Kerfoot.

In the hope of avoiding repetition of the heavy losses during the first and second winters, the Cochrane cattle were driven south to range between the Waterton and Belly rivers, east of Waterton Lakes. But ill-fortune was following the herd. That year winter conditions were reversed, and there was open grazing around Calgary, while heavy snows fell in the south country. Cattle drifted in around Waterton Lakes and were starving. They were trapped by snow-blanketed range and big drifts. Frank Strong of Macleod bargained to get the cattle out of the snowbound lake district with his cowboys for a thousand dollars. They rounded up five hundred Indian cayuses and drove them through the drifts until there was a beaten path over which the hungry cattle came out to graze.

Eventually, however, the Cochrane ranch was able to show splendid progress, and Cochrane cattle were probably the first to be shipped from the Canadian range to Britain.

The Bar U Ranch, backed by the Allens of the Allen Steamship Company of Montreal, held a lease along the Highwood River in the foothills. Fred Stimson, the first manager, acquired no cattle in 1881 and through his policy of careful preparation, many losses and reverses were avoided. Next spring he sent Tom Lynch to Idaho, where 3,000 were purchased in May, reaching the home range in September.

Among the helpers who returned with Lynch on that occasion was the negro, John Ware, later recognized as one of the

greatest riders in range history. A man who, by friendliness and humility, won his way to pioneers' hearts, "Nigger John" remained in Alberta and became a successful rancher. Another notable character who joined the Bar U at that time was Herb Miller, who remained with the ranch for 52 years, and saw it transferred from the Allens to George Lane and then to Burns' Ranches; ultimately he ranched for himself near Macleod.

That great cowboy George Lane came to the Bar U in 1884 when there were 4,500 cattle on the ranch, in response to an order placed with the Sun River Stock Association in Montana. He began work as foreman at \$35 a month, but soon had horses and cattle of his own and in time became the chief owner of the Bar U and one of the "Big Four" in Canadian ranching, along with Pat Burns, A. E. Cross, and Archie McLean.

Oxley Ranch (OX brand) directed by monocle-wearing Englishmen and the Winder Ranch (卐) were founded in 1882, the Walrond (WR) in 1883 and the Quorn (Z) in 1884. A multitude of smaller operators hastened to obtain squatters' rights on the best grassland and establish some claim to springs and waterholes. Much of the Chinook country was not well watered and grass had no value unless it was adjacent to streams or bodies of water. Sheep and cattle could not be expected to graze much beyond two miles from water, and a visitor in the Medicine Hat district, where annual precipitation was about 13 inches and natural watering facilities were not plentiful, remarked that "the cattle which will graze on these plains must be sound in wind and limb if they are to obtain both feed and water in the same day." A squatter's right to a waterhole would not be recognized in a court of law but it was sufficient to discourage newcomers from settling by it. To increase security on the public domain, some ranchers homesteaded the land on which the spring, the key to the surrounding grassland, was located.

Alexander Begg, a scholarly traveller from the Red River, said there were 3,000 cattle in the Bow River district in 1881, and 15,000 in the next year. As enthusiastic as any rancher, he

wrote, "As a stock raising country the Bow River district is the best in America." Others shared his opinion, and importations were now so numerous that he guessed a Bow River cattle population of 75,000 for 1883. The figure, however, was too high.

With a good corral, a branding iron, and a few cowboys, a man could easily convert the Queen's grass into a substantial return in beef. If he were not too particular whose cattle he branded, the possibilities were multiplied. Practically free land, abundant grass on the virgin prairies, and the lowest possible overhead, combined to make ranching a simple and easy enterprise.

Optimism was in the air. Very few cattlemen bothered to put up hay for winter feed. They recognized some risk but accepted it philosophically. The chief dangers lay in over-expansion and in the occurrence of a severe winter. Neither was long in coming.

The summer of 1886 was hot and dry. Fall rains spoiled what hay crops there were, and the cattle were in poor condition at the beginning of winter. To add to the cattleman's worries, beef prices declined sharply and about 200,000 cattle from the overgrazed Montana ranges were driven north to share winter rations with the Canadian stock.

Winter set in early with heavy snows, and remained late. The Chinooks, which had been so faithful in other years, failed to appear. Instead of Chinooks, blizzards came. January of 1887 brought a three-day storm such as the settlers and ranchers had never witnessed. Cattle between the Red Deer River and the State of Texas drifted, starved, and perished. Close to 50 per cent of the cattle in the range country died. Senator Dan Riley called it "the hardest winter in my Alberta experience," and estimated that 75 per cent of the stock in his area perished. I. G. Baker Co. reported a loss of 60 per cent, and losses south of the boundary were just as high as on the Canadian side. An American ranching company, the Continental, was reported as having lost 32,000 head. Some small

operators lost all their cattle. Indeed, one man said he lost 150 per cent. When called upon to explain, he said all his cattle were dead and he still had to pay 50 per cent on their purchase. No matter what method of figuring was used, it was the biggest disaster in the history of Canadian ranching.

Spring thaws uncovered a revolting picture, one that would sadden the heart of the most callous frontiersman, and cast gloom and despair over the range. The rotting carcasses of cattle that had drifted and perished were scattered everywhere and piled in coulees. Stock that survived were emaciated, weak, and frost-bitten. Many were without tails and ears because of exposure and frost.

It was reported that the spring found many of the range horses completely without hair in either mane or tail, for it had been eaten off by other horses during the period of semi-starvation. Kelly, in *The Range Men*, said:

. . . the rabbits died, the lynx left, the herds of antelopes starved in hundreds, the poor brutes wandering into the very settlements, where they were often killed in the streets.

To many of the ranchers it was a crippling blow and some of the large leases were cancelled. The experience impressed upon men of the range the utter necessity of having a reserve of feed for winter use. Commissioner L. H. Herchmer of the North West Mounted Police noted this change of sentiment in his report for 1888:

All ranchers, no matter what class of stock is their specialty, now cut large quantities of hay, and nearly all have shelter of some description for weak stock. Some of the more advanced cow-men are now yarding up their calves in the fall and feeding all winter. It will be found most beneficial to both calves and cows, and the calves of the following season will also be stronger.

Another result of the bad winter was a new interest in raising horses, because these animals had survived the cold and snow better than the cattle. A new settler at Medicine Hat had particular reason for enthusiasm about the adaptability of horses. Not only did his horses come through the winter but

they brought his cattle through also. Winter caught this settler with no feed in store for his livestock, which consisted of some horses, a pair of oxen, and a few cows. When the newcomer noted how apt his horses were at pawing through the snow to get the grass, he tied an ox or a cow to the halter ring of each horse and turned them all out. The horses pawed the snow and the cattle shared the grass and all survived.

Open range had its drawbacks. Control of grazing was impossible and control of breeding was likewise impossible. Once a bull was released on the open range, he could be regarded as common property. He had no more sentiment for the cows wearing his rightful owner's brand than he had for those wearing the neighbours'. There was no incentive to import good bulls for herd improvement when it was obvious that they must share the range with numerous scrub bulls. Some cattlemen owned no bulls and depended upon those released by other ranchers.

Such lack of control resulted in low breeding efficiency and about 1890 some of the ranchers decided upon a policy of importing young cattle of the stocker order, called "dogies" or "barnyard cattle." The Quorn Ranch started it and others repeated. But the eastern-bred "dogies" were disappointing. They lacked the hardiness of the native cattle and they were slow to settle down to range life. Their instinct was to travel and bawl. Some strayed so far in their zeal to return to a hundred-acre farm in Ontario, that they were lost to their owners.

Following the "dogie" experiment of the nineties, some thought was given to augmenting range herds with young cattle imported from Mexico. These were small and poor in conformation; but hardiness was inherent and ranchers were hopeful. Ten thousand head were shipped to the Canadian range in 1902, of which the Bar U Ranch got the largest number. But this policy did not last long and the conviction grew that only by controlled breeding and good management would Canadian ranchers achieve the quality and numbers most desired in their herds.

The nineties produced a series of new trials for the cattlemen. A death-dealing blizzard occurred in April 1891. In the next year the growing cattle trade with England received a serious setback; ostensibly because of disease, the British placed an embargo on Canadian cattle, making it necessary that all cattle from Canada be slaughtered at the point of landing. This meant heavy shrinkage, bigger losses from bruising, and poorer selling opportunities, but it bothered the Canadian cattleman's pride even more than his purse. The western ranchers knew that they had the healthiest cattle in the world and if pleuro-pneumonia had been detected in animals imported to England, it certainly didn't come from the Canadian West.

In 1899, the ranchers received their introduction to the dipping vats, and the range cattle their first baptism in hot sulphur solutions. Douglas Hardwick, who witnessed the prolonged efforts to eradicate mange, believed that infected cattle were on the Alberta ranges for several years before the skin disease was correctly diagnosed. Animals with an advanced skin disorder were shot when encountered on the range, but the parasitic disease increased. The first public dipping vats were constructed around Medicine Hat in 1899.

The ranchers co-operated; the countryside was combed by the roundup riders and the cattle were assembled at the "vat." The long, narrow vat was constructed below ground level, and corrals, chutes leading to the vat, a supply of water, and some means of heating the dipping solution, were provided.

The cattlemen co-operated willingly, but not the cattle. They disliked corrals and chutes under any circumstances and had no desire to make the plunge into the unpleasantly warm liquid. But the chute leading to the vat was too narrow to allow an animal to turn and so, one by one, the cattle leaped into the uninviting fluid, went under and then swam to the place where they could walk out on the inclined floor at the opposite side.

It was a humiliating experience for the untamed critters and it didn't improve their relations with the human family. The Longhorned, Southern cattle presented special problems; some

of them could outrun a horse and the first problem was to get them inside a holding corral. Douglas Hardwick and his friends recalled a seven- or eight-year-old Mexican steer, about 17 hands high, which had escaped the dipping roundup for several years. But ultimately he was caught in the roundup net and when prodded along the chute, his first inclination was to jump across the 30-odd feet of vat before him. Falling short in his furious attempt, he landed with a splash in the solution and bellowed as he swam, "hitting the other side, he lit right out for Mexico at a speed that would surprise a Thoroughbred."

Dipping was conducted with reasonable vigour in the years 1900 and 1901 and mange seemed to be under control. But it broke out afresh in 1904 and dipping was resumed. When the Western Stock Growers' Association met at Medicine Hat in May, 1905, the convention learned that 196 dipping vats were then available and Dr. J. G. Rutherford, Canada's Veterinary General, reported that 411,061 cattle in that section had been dipped once and 176,685 head had been dipped a second time. Under the able direction of Dr. Rutherford, the ranges were ultimately declared free of the troublesome mange mite.

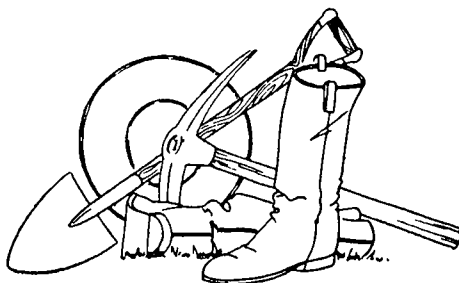
Much ranch business was consolidated in the nineties. Leases and deeded properties were being fenced and ranchers were becoming reconciled to having farmers for neighbours. Beef prices were low but costs were low also. Cowboys were paid \$30 to \$45 per month with board, and a female servant received \$12 to \$15 per month, with a very good prospect of getting a cowboy husband. Under the circumstances, there was no shortage of servants and most of those under sixty managed to become mistresses in their own ranch homes.

While ranchers were fighting mange and resisting the encroachment of homesteaders, sides were being drawn for another range-land battle, the Battle of the Breeds. Spanish character and long horns were conspicuous in the first cattle brought to the plains, but gradually British breeds appeared. Each of at least half a dozen had its advocates, but after Short-horns, Herefords, Aberdeen Angus, Galloways, West High-

lands, Devons, and even some of the dairy breeds were tried, the Hereford emerged the favourite. The premium was on hardiness and while the Hereford possessed no more of this than the Galloway and West Highland, it had the advantage of growing bigger and growing faster. Not only did cattle ranchers like the Hereford but the white-faced breed liked the Canadian grass country and became part of it. It wasn't long until Western Canada could share with the western United States the honour of producing the world's best Hereford cattle, not excluding the native land. Calgary's coat of arms should be the head of a Hereford bull. After babies in that part learn to say "mamma" and "papa," they learn to say "Hereford" and then "Bull Sale" or "Stampede."

The cattle kingdom has seen setbacks in the twentieth century, while the wheat empire has been pushed somewhat beyond its logical confines, but scientific planning can readjust this, and thoughtful agriculturists will continue to recognize the importance of the western beef cattle industry to Canada and to the world.

8 *Klondike Beef*



AMERICANS have made books, poems, songs, and films about the big cattle drives from Texas northward, as indeed they should, but some of the mightiest drives in all time originated on Canadian soil and Canadians seem satisfied to forget about them. Among these are the mighty Harper drive from the interior of British Columbia to California in 1876, mentioned in the last chapter, and the Joe Greaves drive of 1880 from the Thompson Valley to Cheyenne in Wyoming with "no losses except those from purely natural causes." But with the gold rush to the Klondike, deep in the uninhabited North, there was a new challenge to cattlemen and a new chapter was written about cattle drives. The chief hero was Pat Burns, early western ranch owner and pioneer meat packer.

Pat Burns missed the opportunity of a formal education, but after filing on a homestead near Minnedosa in 1878, he made an arrangement with a homestead neighbour to write his letters, love letters and all, and provide some lessons in writing and arithmetic. The tuition was not wasted; with the aid of a worn-down stub of a pencil and the backs of some old envelopes, Burns figured his way into great wealth and became one of the "Big Four" cattlemen of the West. Burns's initiative and tena-

city were never more dramatically displayed than in the Klondike episode.

It all began with the discovery of the precious metal along Bonanza and Eldorado creeks and other streams running into the Klondike River in the Yukon in the summer of 1896. News travelled slowly in the vast northland, but when reports reached the outside world there was a mad rush. Men and a few women from all walks of life and all parts of the world flocked into the North. A small number got through in 1897, but the big rush began in the next spring, before the ice was out of the northern rivers. Before the expiration of 1898, forty thousand people had flocked to the new field.

A few of the would-be miners took passage to the mouth of the Yukon River in Alaska, and travelled upstream by river-boat. Some attempted to penetrate by way of the Stikine River, and some went overland from Edmonton, but the majority followed the "trail of '98" and travelled inland from wild, lawless Skagway, where Soapy Smith, the notorious gangster, gambler, hotel operator, and desperado of the North, ruled and prospered. Stories about Soapy are legion. Some were printed. One which cattlemen brought back concerned a young minister filled with zeal for a new church in that otherwise godless metropolis, Skagway. He needed \$2,000; he raised \$750 by subscriptions, and decided to try Soapy Smith. Sure! Smith would help. He produced his roll and peeled off \$1,250. The minister had his \$2,000, but not for long. Next morning he had exactly nothing. He had been robbed during the night and Smith had his money back with interest. In the summer of the big rush, a posse of citizens was organized under Frank Reid to deal with Soapy, and both Reid and Soapy lost their lives in an exchange of bullets.

Skagway was the principal gateway to the Yukon gold fields; Dawson City was the goal. The problem of transportation over an unexplored, unpopulated, and mountainous country, with a short, almost Arctic summer, was exceedingly great. Hardships and suffering on the trail were tremendous;

snowslides, mountain chasms, and foaming river rapids accounted for many lives, but that is another story. Dawson, like Skagway, mushroomed into prominence and boasted 500 houses, mostly log cabins, less than six months after the first one was erected. It was well supplied with dance-halls, hotels, and saloons, but no place in the world had fewer churches, libraries, or art galleries. Dawson was a gay town and while its glory lasted, it witnessed free spending, heavy drinking, and reckless gambling. Fortunes changed hands overnight. Gold dust at sixteen dollars an ounce was a common medium of currency. It seemed at times that the miners were outnumbered by those who came to "mine the miners."

Gold production from the Klondike area amounted to \$10,000,000 in 1898 and \$22,000,000 in 1900. But in spite of the gold, living conditions bordered on famine. The supply of wild meat was inadequate. Except for very limited supplies, food of all kinds had to be brought in from the coast. At first fresh foods were rarely seen and scurvy occurred from time to time. Food prices, especially winter prices, soared to heights unprecedented elsewhere on the North American continent. Fresh meat went to \$2 a pound and it was far removed from "Red Brand." Flour was a dollar a pound. A few cows were delivered successfully at the settlement and after they had consumed hay valued at \$200 a ton, they had the supreme bovine satisfaction of seeing their butter selling at \$4 a pound. Milk sold as high as \$2 a quart in the winter of 1898-1899 but fell to a mere dollar a quart in the next summer.

Alexander Anderson, who went in with cattle for Pat Burns in 1898 and remained for the winter, told of allowing himself a special treat on Christmas Day by buying three potatoes at \$1 each. Apples and eggs were the same price as potatoes. A restaurant meal would cost anywhere from \$3 up and there was no ceiling. One restaurant announced its rates as:

"Common Feed, three dollars.
Square meal, five dollars.

Belt Buster, eight dollars.
Mortal Gorge, twelve dollars."

An establishment which called itself a hotel offered, "Good bunks, two dollars a night, clean sheets, a dollar extra."

One with Pat Burns's ability to sense and appraise opportunity, could not overlook the acute shortage of food, meat in particular, in the Klondike gold field. He knew something about mines and miners; he knew that with mines there were hard-working and hungry men and a good market for meat. The problem was one of delivery. It was infinitely more difficult than simply slaughtering cattle in the Calgary plant and distributing the beef among the near-by towns and mining villages along the Crow's Nest Pass line.

But how could Saskatchewan and Alberta beef be delivered in the Klondike without heavy or complete loss? It was clear that to ship so perishable a product as dressed beef from Calgary or Vancouver would be costly and uncertain. There was one alternative, to deliver live cattle at Dawson City or at some point on the Yukon River. This might be done in one of two ways, by driving the herds overland from Edmonton, or by driving across the mountains from Skagway and then floating the cattle or their carcasses down the Lewes and Yukon Rivers, following the route of the majority of the miners. To experienced cattlemen the overland journey from Edmonton seemed hopeless. A few people attempted it with cattle and horses but the venture was never completed.

Norman Lee, who started a large herd overland from Chilcotin in the interior of British Columbia, almost realized success, however. The great adventure, as related by E. D. Sheringham who accompanied Norman Lee, began on May 17, 1898, when 200 beef cattle, 30 pack and saddle horses, and 6 men began the long journey from Chilcotin. The herd was divided into bands of thirty or forty head with a rider in charge of each.

The spare saddle horses were driven ahead of the cattle.

The man in charge would halt when a good feeding ground was reached, build a fire, and prepare a noon-day lunch for the on-coming cattlemen. The pack train and cook would pass on and locate a suitable site for the night camp. Ten to twelve miles represented an average day's progress.

The trail led up Alexis Creek to touch the old Telegraph Trail at Blackwater River, then to Hazelton on the Skeena, Telegraph Creek on the Stikine, and northwest to Teslin Lake. Much of the trail was through heavy timber and mud swamps but the cattle went over in fairly good order. The horses suffered more than the cattle; some of them became victims to "mud fever" and lost their hooves. Practically all the horses were lost and the attendants were obliged ultimately to do the herding unmounted.

Arriving at Teslin Lake on October 3, four and one-half months after leaving Chilcotin, Lee began the construction of two rafts, each 40 feet by 16 feet, on which the beef was to be carried down to Dawson. Then the cattle were slaughtered and the carcasses piled on the new rafts. But misfortune lay ahead. For two days, beginning October 17, a gentle breeze moved the rafts steadily over the lake. On the third day a severe mountain storm arose, which wrecked both scows and resulted in the complete loss of the cargoes.

Some other Chilcotin herds were on the trail at that time but none appear to have reached Dawson City. John Harris started after Lee with 200 head, passed him on the trail, slaughtered at Teslin, and then had the misfortune to see his beef cargo "frozen in" about 200 miles above Dawson. The loss represented a herd of cattle, five months of time, and a lot of hardship. Jim Cornell started from Chilcotin about a week ahead of Lee with 75 head of bigger cattle and when Lee arrived at Telegraph Creek on September 2, he found Cornell operating a butcher shop and selling his cattle over the block.

John Gravel, who died in 1942 at the age of 81, was another who drove cattle north from Chilcotin in '98 and almost made a fortune. After driving for 1,600 miles and slaughtering the

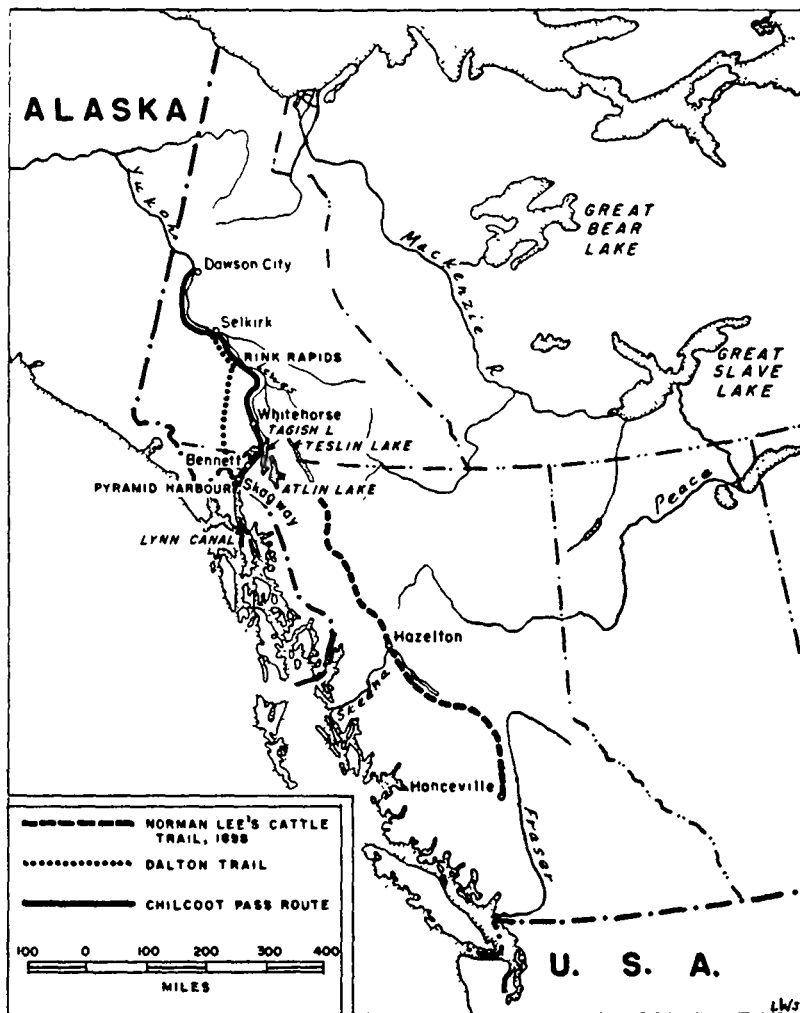
cattle, he had the same sad experience as John Harris and saw his scow carrying 120 carcasses caught in the ice on Thirty-Mile River, beyond Teslin Lake. The beef was a total loss and so was Gravel's hope for fortune.

Burns weighed all the evidence and concluded that the only practical plan entailed driving from Skagway or some near-by point on the coast. This plan called for cattle of an appropriate type, resourceful attendants, and good direction. The cattle would have to be hardy, mature, hardened walkers, and capable of travelling difficult trails.

From the Alaskan coast several routes led over the mountains, all forbidding and hazardous. The Dyea or Chilkoot Pass route was the most direct and the most dangerous. It was taken by the majority of the miners. The Chilkoot and White Pass routes offered the best use of rivers and lakes, while the Dalton trail, known too, as the Chilkat route, was somewhat more westerly and joined the river at a point below White Horse Rapids.

Chilkoot meant thirty-five difficult miles between the head of Dyea Inlet on the coast and Lake Bennett. For the first eight or ten miles from tide-water to the foot of the canyon, near Sheep Camp, the journey was easy and pack horses or cattle walked along briskly. But from that point forward the trail was narrow and treacherous; it rose abruptly and was punctuated by canyons, ice, mountain streams, threatening boulders, and snow slides. An avalanche of major proportions came down upon the trail and took sixty-five lives in the year of the stampede.

Hundreds of horses went to their death on this gruelling trail. One traveller estimated three thousand dead horses on the Chilkoot trail late in the summer of 1897. Pack animals were in keen demand and many cattle that were sent north for slaughter were requisitioned to carry supplies. One party that undertook to drive sheep over the winter trail went to the length of placing packs on their frail backs.



CATTLE ROUTES TO THE KLONDIKE

The descent from the summit to Lake Lindeman and Lake Bennett could be made with more speed but no more safety. Lake Bennett was the recognized head of navigation. At that picturesque northern lake, floating craft of all varieties, canoes, row-boats, sailing vessels, and rafts, were under construction. A small saw-mill had been erected a year before and rough lumber for boats was selling at \$100 per thousand feet.

Lake Bennett was the beginning of a series of narrow lakes connected by short streams. After Bennett were Lakes Nares, Tagish, and Marsh, all part of the chain. Seventy miles from the head of Lake Bennett, vessels passed from Lake Marsh into the river. Another twenty-five miles and navigators found themselves facing Miles Canyon and the terrifying death-hole, White Horse Rapids. In the canyon, the river narrowed to a hundred feet or less. Overhanging basaltic cliffs darkened the water; the current grew faster and the roar of the mad water became deafening. There were few obstacles in that half-mile of canyon, however, and for any craft that remained clear of the rocky walls, the risk of mishap was not great.

What travellers feared most were the White Horse Rapids, wild, boisterous, foaming, and half a mile long. The price of experience in those waters was high and many disasters occurred with some loss of life. Some of the men of '98 portaged at that point; others chose to run the rapids. As a raft or boat approached the roaring torrent, it seemed to be drawn in; it whirled, twisted, and collided with rocks. Once the rapids were entered there was no turning back and disaster or triumph followed quickly. At the lower end of the rapids was White Horse, in 1898 a tent-town.

At least one load of sheep on its way to the gold fields in 1899 was wrecked and lost in that seething cauldron, and tales are told of cattle rafts that were dashed to pieces on the ugly rocks. The Chilkooot was not a practical route for cattle. The rapids was one powerful reason and the difficulty of moving a loaded cattle raft over the still waters of the lakes another.

The first fresh beef to reach Dawson City was from a small

herd of thirty cattle which Jack Dalton delivered late in 1897. Burns was next to make delivery.

When the first Burns herd went north with Billie Perdue in charge, scant information was available about the various routes. But Burns realized that the early deliveries would command the best price and his idea was to send a herd north during the winter of 1897-1898, and start it over the Chilkoot Pass route in April.

The cattle for that undertaking were bought in Oregon. They were gentle cattle and many were broken to work in harness. In this there was a double purpose. They could be hitched to sleighs to convey feed supplies on the trail, and they could be used to haul logs to the river at the point where cattle-rafts or beef rafts were to be constructed.

This cattle drive needed tough, experienced men. In going upward through the passes, there were places where sleighs could not be drawn by the cattle and both sleighs and cargoes had to be hoisted by the herdsmen. Burns planned in this instance that the herd should be driven over the ice for about two hundred miles to the lower end of Lake Labarge, and there held until the ice went out in the river and a raft could be constructed by the attendants. The lower river was free of ice before the break-up occurred on the lakes.

The cattle raft was about 50 feet long and 40 feet wide with strong railings about it, and many divisions to ensure an even distribution of weight. A craft of these dimensions would carry forty to fifty head, penned off in groups of eight or ten. At high water such a raft was carried along briskly and the river journey from Labarge to Dawson made in good time. A derrick was erected and some beef was dressed while the raft drifted downstream so that upon arrival at Dawson sales could be made forthwith.

Beef in sides or quarters from that shipment commanded a dollar a pound. No matter how tough it was, it offered a refreshing change for those who had been living on wild meat. When the beef was marketed, the logs in the raft were sold for build-

ing purposes, and attendants were then free to pursue their various ways. Some remained to prospect for gold while others were happy to begin their upstream journey to the coast and home.

With the exception of this single herd, all the Burns cattle for Dawson City were landed at Pyramid Harbour and taken over the Dalton trail. That route was longer and therefore unpopular with the miners, but it was better for the cattle. It by-passed the worst of the rapids, and was comparatively level. It was not monotonous, however, because every mile presented new problems in the way of muskegs, river flats, thick trees, streams to be crossed, mountain passes, poisonous weeds, areas without feed, and myriads of flies to torment man and beast. Much of the trail was on dry river-bottom where pebbles hurt the feet of the animals and volcanic ash caused some cattle to become completely crippled.

In every herd a few cattle had the habit of straying from the main band and becoming lost. The first bought for the Yukon trade were farm cattle but it was ultimately concluded that range-bred cattle were not so likely to scatter and were more suitable. In travelling the thick bush and mountainous areas, the cattle had to walk in single file. The practice was to divide a herd of average size into three sections. Five or six good lead cattle were placed in the vanguard and driven by an attendant. These were followed by a second group of twenty or twenty-five head and the balance of the herd was in the third section.

Selkirk or some other point below Rink Rapids was the end of the trail for the majority of the herds travelling in 1898. Early in the season, the rafts were built for live cattle but when the days shortened and weather turned cool, the herders generally slaughtered at the river and placed the quarters of beef on the rafts. Of the cattle shipped that year, more were slaughtered between Rink Rapids and the mouth of the Pelly than were delivered alive at Dawson.

Most of the rafts constructed to carry carcasses were about

60 feet long and from 20 to 30 feet wide. The amount of beef that could be transported on such a raft depended upon the dryness of the timbers used in its construction and the depth of the river. Late in the season when the water was low, gravel-bars were troublesome and rafts had to be loaded lightly. As a general rule, however, a raft was expected to carry from six to ten tons of beef.

In addition to carcasses, the hides and some of the viscera, such as the livers and lights, were recovered and taken to Dawson. A very few hides would make all the leather needed at Dawson, but it was discovered that they could be used profitably for making dog-feed, and there were plenty of dogs in Dawson. Consequently, no hides were thrown away. The custom was to cut the hides into small pieces and cook them with oatmeal and some visceral organs into a dish which appealed highly to Dawson's ravenous malemutes.

William Henry left Calgary about the middle of June in 1898 with a herd of 180 Pat Burns cattle and 22 saddle and pack horses. The cattle were five- and six-year-old steers. Docking at Pyramid Harbour, the cattle, horses, feed supplies, and equipment were unloaded right on the beach and on July 1, the drive started over the Dalton trail. Crossing the summit, the herd dropped down towards the river and along the mighty Yukon, then passed Five Fingers and the Rink Rapids to the mouth of the Pelly River, where the cattle were held until rafts could be constructed. It was September 20 when they reached Pelly. Henry and his helpers made their rafts upstream at Five Fingers. They made two rafts, each 74 feet long and 36 feet wide, with two sweeps at each end for steering. The rafts were taken down to the herd and the dressed carcasses and hides floated to Dawson. The river journey from Pelly to Dawson occupied ten days.

That beef met with a ready sale but at a slightly reduced price. The police bought 75,000 lb. at seventy-five cents a pound, and the balance, in smaller lots, brought \$1.00 per

pound. The hides were sold at fifty cents a pound; thus an 80-lb. beef hide brought \$40 or its equivalent in gold-dust. It seems like rather luxurious dog-feed.

There were others beside Burns, of course, who were attracted by the Yukon cattle trade in 1898. Among those who made successful drives with Canadian cattle were one "Cow" Miller and one "Mexican Jack." Mexican Jack placed live cattle on the rafts just below the rapids and floated them successfully to Dawson City. At Dawson, some of his cattle were turned out to graze but they were restless and a few of the big steers managed to swim the rivers and make their way back to Pyramid Harbour.

A Brandon butchering firm made several drives; W. J. Burchill bought the cattle, mostly four-year-old steers and fat farm cows, while J. A. Howie accompanied the shipments into the North. Robert Lane, also of Brandon, was sent ahead to make preparations and construct the rafts. The herd sent north in 1898 numbered 100 head. It left Brandon late in May, and was placed on three scows on the river nearly four months later.

Colonel F. O. Sissons of Medicine Hat found it necessary to shoe some of his cattle for the trip over the passes. That herd connected with the river close to the mouth of the Pelly and cattle were slaughtered on the rafts. The beef from Medicine Hat arrived at Dawson City just as the river was freezing over. Another day and the cargo would have been frozen in a few miles above Dawson. Prices by this time had dropped sharply and beef and hay were selling at the same price, twenty-five cents a pound.

George S. Tuxford, W. A. Tuxford, and James Thomson left Moose Jaw on May 24, 1898, with 70 cattle, 3 ponies, and a good dog, and arrived at Dawson City with their cargoes of dressed beef on October 24, exactly five months later. The cattle were mostly three-year-old steers with a few broken oxen. They shipped via Vancouver and landed at Pyramid Harbour, from which point the long drive over the Dalton trail began. The Tuxfords had trouble in keeping the cattle together but

during the overland journey that ended at Rink Rapids they lost only four steers and a pony; one steer strayed away, one died from poisonous plants, and two were shot when their feet wore out. At Rink Rapids, where the rafts were constructed and the cattle slaughtered, the cattlemen encountered some sheep from a consignment that had been wrecked in the rapids. The owners had drowned and the surviving sheep had gone wild.

The rafts constructed by the Tuxfords and Thomson to carry the dressed beef from Rink Rapids to Dawson were 60 feet long and 24 feet wide and were tied together with cross-timbers every 12 feet, held in position by means of birch pins. On October 3 the two ponies were turned loose and the loaded rafts were released into the current. Gravel bars created serious delays and ice was gathering in the river before Dawson was reached. Arriving late in the season, they missed the best market for beef. The first raft load sold at forty cents a pound.

During the winter of 1898-1899, greatly exaggerated reports about food famine at Dawson City reached the towns of the Pacific coast, and money was raised immediately to send relief supplies down the frozen river by means of reindeer hitched to sleighs. Part of the plan was that at the end of the journey the reindeer would be slaughtered to furnish fresh meat. A few of the reindeer outfits completed the difficult journey but the reindeer and their drivers, upon arrival at Dawson, were more in need of relief than the inhabitants of the town.

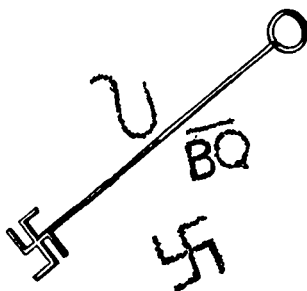
In the spring of 1899 cattle were again moving to Dawson City. All cattle traffic was on the Dalton trail but in the meantime the White Pass had been chosen as most suitable for the projected railway, and construction went forward in 1899. In the fall of that year the narrow-gauge road had been extended to Bennett and river steamers were plying above and below the rapids. With the newer service, the transportation of cattle and other livestock was simplified considerably. After being carried over the mountains, cattle were placed on scows and towed down to Dawson, portaging only at White Horse Rapids.

Prairie cattle were delivered in the Yukon for a number of years, although for reasons not at all clear, most of the sheep to enter the northern trade were from the United States. Stockmen in the Territories argued that a railroad from Edmonton to the Yukon would give the entire trade to Canadian growers.

The method of delivery changed a good deal as time went on. E. "Shorty" Merino, a cattleman reared on the Douglas Lake Cattle Company ranch in British Columbia, went to Dawson with a herd of 150 head of cattle in 1909. The heavy cattle, capable of dressing thousand-pound carcasses, were the property of the Pacific Cold Storage Company of Tacoma, Washington, but were from the company's Alberta ranch. They left Calgary on April 28 and arrived at Dawson City May 25. After landing at Skagway, the cattle were transported over the narrow-gauge railway of the White Pass and Yukon route, to White Horse. From the latter point, they were driven overland to Yukon Crossing, a ten-day journey which was made at the rate of twenty miles a day. No feed was carried but imported hay was bought at the stage stations along the way at \$125 a ton. The final lap of the journey, from Yukon Crossing to Dawson (about 250 miles), was by barge.

The Klondike trade was of great benefit to the prairie growers; it put money in the ranchers' pockets, it relieved the ranges and it afforded an outlet for rough cattle, stags, oxen, and bulls, which otherwise would have met with slow sale. Above all, it proved that Canadian cattlemen could finish a difficult job as well as start it.

9 *Chuck-Wagon Romance*



If the red-coated Mounted Policeman has a rival for the admiration of hero-worshipping small boys, it is the western cowboy. And if anyone could better the Mountie's record in ruffling the hearts of not-so-small girls, it would be the hero of the range in his good cowboy clothes.

Not that the working cowboy ever resembled the decorated and dashing hero of the movies. He fancied a coloured shirt for Saturday night when he moved in on Fort Macleod or High River but otherwise his garb, including broad-brimmed hat,¹ snug-fitting jeans, and high-heeled boots, was designed for utility. Masculine qualities outshone finery. A cowboy was a two-fisted gentleman, a man of action rather than of words.

From the days of the mighty trail herds of Longhorns, the cattleman's work was hazardous but exciting. It was coloured by wild stampedes, fights over water rights, rustling, shooting, hard riding, and the bleaching bones that told of hard winters. These were not merely the dreams of poets and romancers. They were the grim realities of a frontier industry. The cow-

¹In the spring of 1951 a young Alberta farmerette, interviewed on one of the CBC farm broadcasts for Ontario and Quebec, was asked if she "always wore that ten-gallon hat." "Oh, yes," she replied quickly, "whenever I come East."

boy's range made a perfect setting for film and short story. But many of those who wrote the stories never saw a ranch, and it was small wonder that the cowboys found it difficult to recognize either their habits or themselves. As W. P. Webb says, in *The Great Plains*:

The Easterner with his background of forest and farm, could not always understand the man of the cattle kingdom. One went on foot, the other on horseback; one carried his law in books, the other carried it strapped round his waist. One represented tradition, the other represented innovation; one responded to convention, the other responded to necessity and evolved his own conventions.

Life in the saddle attracted young men from many parts of the world. Remittance men came from England, bad boys from Ontario, earnest young fellows from everywhere, and experienced cattlemen from the South. The newcomers underestimated the hardships and many acknowledged disillusionment and left. Others felt the fascination of the range country; they remained to acquire a few cattle and sometimes ultimately large ranch holdings.

The typical cowboy of the Canadian West was unpolished but he had to be good stuff. The law of the range, born of necessity, said that he had to fight to defend himself, his boss's property, and the honour of the ranch. Often in the early years he was armed, and he knew that carrying a gun was a huge folly unless he could shoot straight and shoot fast. He learned to do both.

But he didn't go about shooting holes in people and bar-room chandeliers. Those who concocted the biggest lies about his shooting and courting evidently overlooked the fact that he was a working man. His devotion to duty and his skills in handling cattle would have made truer and better reading. Cowboys who remained with the herd through a bad blizzard knew the meaning of duty and service. In the March storm of 1938, when heavy losses were sustained across the cow-country, there were riders who did not leave the drifting herds. Complete control of such herds was impossible but some guidance could be given. For two days the riders on one Alberta ranch re-

mained with the cattle, allowing them to drift, but guiding them away from fences and other pitfalls. For miles and miles the riders and their faithful mounts felt the sting of the icy blizzard and for two days had neither food nor rest. In that herd no cattle were lost, notwithstanding an average wind velocity of sixty and a half miles per hour for eighteen consecutive hours, as measured at Manyberries. The storm continued for sixty hours.

Cowboy traditions were made on the trails from Texas. In those trail years a herd of 2,500 head was considered most suitable for a long drive. Larger herds were cumbersome and had to be moved slowly. Dale refers, in *The Range Cattle Industry*, to a huge trail herd numbering 25,000 head, which was spread along the route for 20 miles. It was too big to be efficient and nobody tried to duplicate the record.

A trail outfit included a chuck wagon, a cook, about six riders for every thousand cattle, six to ten horses for every cowboy, a horse wrangler, and the boss or captain. Only the best cowboys were employed. Trailing demanded top riders and the best brains. The captain and the "old hands" with the most pronounced bow in their legs rode in the lead positions, while newcomers or inexperienced helpers, who were doing their best to walk bowlegged, rode in the dust at the "drag" end.

Twelve to fifteen miles a day was considered a good average for a trailing herd and the trip from Texas to Kansas took two months or more. A representative day consisted of grazing in the proper direction for two hours in the morning, driving briskly until noon, a two-hour rest stop, several more hours of slow travel to allow grazing, and then settling for the night. With careful driving it was possible to make the trip without shrinkage.

Riders, usually two in number, were on "night herd." Competition wasn't heavy for that post, especially in Indian country and on rainy nights. While the night herder waited for morning, he usually wished that he had taken up blacksmithing instead of punching cows. It was doubtless during the long dark hours

that he composed many of the mournful cowboy ditties whose soporific monotones are so popular on radio programmes, and must have made even the cattle drowsy. What the night riders feared most was a stampede. It called for skilful riding; the hope was to turn the leaders, and get the herd running in a circle.

The cowboys spent most of their working hours in the saddle. They became artists with the lariat and they demonstrated how versatile a tool that instrument could be. Work that could not be accomplished by means of saddle horse and rope was considered beneath the cowboy's dignity and was likely to suffer from lack of attention. When a police officer at Macleod was unable to hire a man to dig a well, he attributed his failure to the fact that "a man cannot dig a well from a horse's back."

Even the language of the cowboy was distinctive. There was a sagebrush tang about it. It had traces of Spanish and reminders of Texas, but was mainly the product of a rare but simple chuck-wagon philosophy. Rodeo, remuda, bronco, chaparreros, lasso, and many other terms, including "ranch" itself, were Spanish or Mexican in origin. Lasso comes from the Spanish for slip-knot, and pinto means paint. A remuda was the band of extra saddle horses carried with the roundup for use in some sort of rotation as required by the cowboys. Bronco, which is applied to range horses with ambition to be wild, came from the Spanish word meaning rough. And bronco-buster, bronco-twister, and bronco-peeler were synonymous terms for the skilled cowboy whose duty it was to convert the wild horses to domesticity.

Terms of semi-local origin became as numerous and as expressive. Bed-ground is a remnant of trail days and applied to the place chosen for the night camp. Bow-wows were thin cattle, and dogies were young stocker cattle, who developed a profound homesickness for the farm on which they were raised. When the bronco-buster grasps the horn of the saddle to increase his security, he pulls leather and is subject to disquali-

fication if he is in a contest. And scratching has no connection with itch; rather it refers to the use of the spurs in a bronco-riding competition.

If Canada had its cowboy centre in the heyday of the range, the honour belonged to Fort Macleod. It was a community of rugged, bowlegged men, among whom the ability to stay on a bad horse carried more prestige than a trunkful of good clothes or a diploma from Eton. Fort Macleod could boast more hitching posts than any town of its size in the world. And no other town north of the boundary saw so much of the big bull-team units which hauled heavy freight wagons to and from Fort Benton.

But the sixteen-ox freight teams and the saddle horses and cowboys which lined the street were no more distinctive than the Macleod Hotel and its colourful proprietor, Harry Taylor, alias "Kamoose" Taylor, alias "Old Kamoose." Taylor would never consent to be separated from the Macleod cowboys. Story has it that he had been a missionary in the gold diggings of the Cariboo fields but had decided that trading whisky in the Territories would be more lucrative. It did pay better, but the arrival of the Mounted Police converted the traders to other professions and Taylor erected a hotel. This was a cowboys' hotel and there wasn't another like it. It dispensed good cheer more than luxury. Its roof was guaranteed to keep the snow off the beds and the walls were expected to break most of the wind. When a frost-bitten morning visitor from the road stood beside the stove in the hope of thawing the icicles from his mustache, a paying guest looked at him and asked, "What room did you occupy last night?" The hotel could furnish almost everything that came in bottles, but the guests who wanted door keys, clean sheets, or hot water, heard Kamoose say "This is not London."

There were no dull moments at old Fort Macleod. One could count on something resembling a rodeo event every day. An episode which lingered in the memories of the early residents concerned a tough horse and an equally tough cowboy. Horses

from the Winder Ranch were being held in a corral at the livery stable, pending sale. The corral was fenced on three sides and bounded on the fourth side by a thirty-foot cutbank which dropped to the river and should have been as effective as a good fence.

A police officer arrived to select some horses for remounts and all went well until Charlie Sharples mounted a horse that evidently did not fancy joining the North West Mounted Police. The horse behaved badly and, near the cutbank, it balked. Sharples drove his spurs deep into the horse's flanks and the animal went into an explosive whirl, rushed at the cutbank and leaped straight out into space. Onlookers dashed to the river's edge, expecting to see a mangled mass of horse and human remains. What they saw was the cowboy still in the saddle, and the horse swimming to the opposite shore, none the worse for its leap. But then, this was Fort Macleod, where anything could happen.

No phase of early cowboying possessed more glamour than the roundup. It was like the threshing season on a wheat farm or election day at Prince Albert. Its mother was necessity and its father was a chuck-wagon. It became the leading social and economic institution on the American and Canadian range.

There might be three roundups each year. The general roundup starting at the beginning of June was the most important, but a midsummer roundup might be held for the purpose of branding late calves, and in the fall roundup the fat beef were sorted out for shipment.

The general roundup, in the course of which the riders fanned out to cover the face of the cattle country, was a grand affair. But the range was too big and district roundups began to take the place of the general effort. Between the Cypress Hills and the mountains and south of the Canadian Pacific Railway, were eighteen organized districts, each of which had an executive body. The executive set the date for the commencement of the roundup, appointed the roundup captain, and owned the equipment, including corrals, tents, and wagons.

Costs were paid by the ranchers according to the size of their herds.

At either the general or the district roundup, ranchers were represented by their cowboys. Each rider had his string of six to ten saddle horses, which were used in rotation for gathering and working the cattle. The captain was usually elected from among the ranch foremen present, and he bristled with authority as he issued working orders to the forty or sixty obedient cowboys. His post, like that of the Minister of Finance, was inclined to bring prestige rather than popularity, however. The only person whom he could not boss was the cook.

Nobody crossed the indispensable autocrat who ruled over the chuck-wagon. He wielded too much power. He could inflict anything from humiliation to starvation upon his enemies. The roundup captain knew that he could fire the cook but he couldn't boss him.

The cook's wagon, made popular in recent years by daring chuck-wagon races, carried a ton or two of utensils and provisions for the camp. Occasionally that pioneer wagon figured in a cross-country race, but usually it was hauled steadily and not very fast, with four horses drawing it and the cook driving. In rough country, the chuck-wagon outfit was accompanied by one or two outriders who used their lariats to render assistance on bad grades or to ensure against upsetting on the hillsides.

One or two horse wranglers constituted an important part of the roundup gang. Theirs was the duty of herding and caring for the horses not in use. When two were employed, the senior member took the day shift and the "green" hand did night duty. Breakfast was served at sunrise and the wrangler was expected to have the horses in the corral before that time so that the cowboys could select their horses and saddle up without delay. Those early morning hours were the best in the day for roundup purposes and the rising alarm might sound at any time after two a.m., with the work day ending before the heat of noon.

Green horses were used to gather and deliver cattle to the nearest corrals where the "educated" horses were employed for

the more technical work of "cutting" and sorting. Cows with calves to be branded were cut out first. The "cutting" was performed by the most skilful cowboys so that each calf was removed with its dam and thus its identity established. When a calf broke away from its mother, both were left until they reunited. Cows of one brand were herded together until the calves could be branded and then the herd was worked in the direction of its home range.

The roundup meant hard riding, long hours, and great fatigue. The entire range had to be combed because a rancher's profit depended upon the recovery of all cattle belonging to him. Cattle might travel a hundred miles or more from home range and it was not uncommon for Pincher Creek cattle to be found at Medicine Hat. Cattle that strayed so far were passed from one roundup district to the next, through the help of visiting "representatives," until they arrived on home grass.

If the modest hunt for Sergeant Whitney's fourteen cows and a bull which had been released so daringly amid buffalo and Indian hazards could be called a roundup, it was the first on the prairies. But the first organized cattle gathering having undisputed claim to the title was centred at Fort Macleod in August, 1879. Sergeant Parker was captain. Sixteen cowboys and one wagon participated, and the riders were handicapped by having only one mount each. They covered a lot of territory but did not get as many cattle as expected, about six hundred head in all.

Evidently the chuck-wagon was not well stocked either, because the cook was obliged to rustle wild duck eggs to augment rations. Fred Kanouse, who was on that round-up, had no qualms about eating duck eggs. If there were birds in them, so much the better. There was a standing offer that Kanouse would exchange one clear egg for one with a duck in it at any time one of the latter was encountered.

The biggest roundup in the history of the Canadian West took place in 1885. The men for that gigantic undertaking gathered at Fort Macleod on May 25. There were over a

hundred cowboys, sixteen chuck-wagons, and 500 saddle horses. The roundup gang split, with Captain Jim Dunlop leading one party in the Pincher Creek country and George Lane and another group combing the Willow Creek area. Over 60,000 cattle were collected. Rev. John McDougall told of looking down upon the valley of the Sun River in Montana in 1875 and seeing 23,000 cattle gathered there in one herd in the annual roundup.¹ After viewing this herd, the exact number of which was known, McDougall ventured the guess that he had many times seen herds of buffalo numbering more than half a million head.

Mavericks, or unbranded and unclaimed cattle, became an important and profitable by-product of the early roundups. Rangeland tradition has it that some Irish settlers by the name of Maverick went to Texas in the years before the Mexican War. After brands were adopted as a means of identifying ownership, the cunning of one member of the family resulted in the immortalization of the name. It seems that Joe Maverick made public objection to branding cattle, on the grounds of cruelty. Unsuspecting neighbours were impressed by his humanitarian scruples. They agreed that if all other cattlemen practised branding, Maverick's cattle would be identified by the absence of a brand. The solution appeared to be a happy one until the following year when the arithmetical increase in Joe's herd contradicted all accepted limits in normal reproduction. Even twins from every Maverick cow failed to explain this calf crop. It became apparent that while Maverick had a big crop of calves, his neighbours had small ones. They say that Maverick kept the cattle but never again did his fellow ranchers agree to accept his suave humanitarianism, and from that date unbranded range cattle were known as mavericks.

Stealing or "rustling" presented serious problems throughout rangeland history. Two classes of cattle were involved, unbranded stock or mavericks which invited a rustler's branding iron, and branded animals upon which the brand characters

¹What is said to be the biggest roundup of all time was Roundup No. 15 in Eastern Wyoming in 1884, in which 400,000 cattle were gathered.

could be altered. In the former the rustler or his gang would gather and move the unmarked cattle to an isolated place for a branding bee. In the other case, existing brands were changed by using a running iron which was carried strapped to the saddle or stuck in the leather boot-top of the rustler. A running iron is a poker-like piece of metal, smaller and more convenient to carry than a branding-iron. It is slower to use because it has to outline or "run" the brand instead of making a single impression but it makes a far more versatile and effective instrument for alterations. Professional lifters became experts in changing original characters on branded cattle as well as in cutting out mavericks.

The use of the running iron would have been prohibited by law, had it not been for its legitimate use in some cases. Ranchers travelling a long distance from home would quite properly carry a "straight iron" in preference to the more cumbersome branding irons. But any person who handled a running iron with more than ordinary skill was immediately under suspicion. The police were familiar with all the brands owned in their districts and became proficient in identifying altered brands. The original character of altered brands could be identified with greater ease by soaking the hides of the slaughtered animals and examining the inside or flesh side.

Many of the big ranchers considered it their right to brand unmarked cattle found in their herds at roundup time. In quality of crime this was considered less serious than changing a brand and if Kelly was correct, quite a few of the big operators could thank the "running iron and the skill of their rope arm" for much of their progress. "Nigger" John Ware held somewhat the same view; he said that in his time, "the greatest secret in ranch success was a fast horse and a hot iron."

The Canadian West witnessed its share of rustling and the valleys and coulees of the foothills could tell more than has been written, but these never knew the high-handed robbery of large herds such as was reported south of the international boundary.

Mavericks found at roundup time presented a problem. Some were cattle which had broken from the fenced farms of settlers and others were ranch cattle which had eluded the roundup. Some mavericks fell before the axe of the camp butcher and others were sold by the roundup association to help meet general expenses. But failure attended repeated attempts on the part of roundup associations to make the sale of mavericks legal.

Professional rustlers took steps to increase the population of mavericks and thereby increase the fruitfulness of their business. When there was opportunity they would disorganize a ranch herd in the hope that calves would become permanently separated from their mothers. Until branded, a calf's identity and ownership could be established only when it was following its mother. The police reported instances of cows being driven across a river, their calves left behind to become the booty of rustlers. Ingenious and cruel thieves went so far as to split the calf's tongue so that it could not suckle and would shortly stop following the cow.

When the law was unable to cope with the problem of rustling in the United States, ranchers, ever a resourceful group, took it upon themselves to deal with the offenders. The cowboys were armed and many of them became skilful with their six-shooters. Punishment, varying from a tar-and-feathering to a quiet hanging, might be meted out to rustlers so unfortunate as to be caught. Because the rustlers in certain sections were organized to carry out their work of thieving and rebranding cattle, the ranchers also banded into organizations in the hope of matching their adversaries, and a few pitched battles were written into ranch history. Among these were the famous wars of Johnson County, Wyoming, and the Tonto Basin, Arizona.

Montana's problem in preserving order in the new cow-country was made worse by the discovery of gold. The Montana "strikes," like others in history, attracted a mixed population and lawlessness became acute. Cattlemen were shot, herds were


stolen, stage coaches were held up, and neither life nor property was safe. In self-defence and to give force to what they considered right, the citizens organized the famous Vigilantes in 1863. The Vigilantes made a thorough job; crime did not cease in Montana but the Vigilantes hanged enough of the rogues to cripple the efforts of the organized outlaws and cool the ardour of the others.


This was the cattle industry which moved unceremoniously across the border and on to Canadian grass. The grazing on the Northwest Territories side was just the same as that on the Montana side. And ranch character was unchanged except that Canada had her North West Mounted Police and there was less gun play and no need for the Vigilantes.

The enormous expanse of prairie land over which range cattle roamed in the years of open range, the opportunities for rustling, and the fact that many settlers did not mark their cattle, made more work for the police. But the officers were on the job and appeared in unexpected places. In some instances, members of the force disguised themselves as cowboys and worked on ranches to obtain evidence with which to convict. Then, when convictions were obtained, the sentences were heavy enough to convince everybody that such mischief was dangerous. Ranchers of old days long remembered the clever police work of Detectives Eagen and Piper, and with what dispatch Judge Arthur L. Sifton dealt with rustlers.

Brands of the big operators were known far and wide in the cowboy fraternity. The brand was the rancher's coat of arms, better known than the name and initials of its owner. In many instances the description of the brand became the accepted name for the ranch, "Bar U," for example, and "The 76." It was important to select a brand which could not be changed easily.

Many of the early brands were novel and elaborate in design, and those to which a name could be attached were favourites. An examination of the old brand books will reveal many of special interest like the Spectacle Brand, Rocking Chair, Block B, Fiddle-Back, Forty-Four, Ladder Brand, Arrow,

Boot Heel, Bar-U-Bar, Bridle-Bit, Horse Shoe, Ox-Yoke, Dollar Mark, Top Hat, and Turkey-Track. A "flying" letter had wings on either side or, as in the case of the famous  (flying U of the Matador), on one side only; a "lazy" letter was on its side; a "tumbling" letter, at an angle of 45 degrees.

The brand  used by B. H. Campbell, a pioneer United States rancher, gave rise to the name Barbecue Campbell, and ultimately to a term now used widely to describe a method of cooking meat, Campbell style.

The rancher was a specialist. He majored in cattle, sheep, and horses and he minored in grass. He could do things with a rope that would have astonished Houdini, and defy the law of gravity to stay in the saddle on an outlaw horse. He knew which way a cow would turn, and he could estimate the amount of red meat under her hide with fascinating accuracy. Pat Burns would ride through a herd of cattle and after making a few hieroglyphics on the back of an old envelope, come up with an estimate of weight and value which would have astonished an engineer with a slide-rule.

T. A. Hargraves of Medicine Hat told about Harry Mullens, later Senator Mullens, bidding on three hundred head of cattle at Dunmore. Said Mullens to the owner, "I'll give you \$13,420 for the lot and will not bother to weigh." The owner was cautious and refused to sell except at a price per pound. The deal was completed on a per pound basis and after the big herd was scaled, the total return was fifty cents less than the original offer.

The skill and daring that characterized the work of the cowboy were carried into his play. The rodeo, which featured the scene and skills of the range, began in the south and was the only sport that grew from a local industry. The Mexicans have held events resembling a rodeo for a hundred years and the town of Pecos in Texas boasted one in 1880. Denver, Colorado, organized one at the world championship level in 1896. In the years which followed Cheyenne, Fort Worth, and Pendleton took it up. On the Canadian side there was an annual

bucking competition at Fort Macleod for some years, beginning in 1886.

Four Alberta cattle kings backed Canada's first big rodeo. This was held at Calgary in 1912. With George Lane, Pat Burns, A. E. Cross, and Archie McLean, was associated Guy Weadick, a young cowboy with an unusual gift for organization. Handsome prizes were offered in the hope of attracting the best cowboy talent on the continent. And then to make good company for the top cowboys, a search was made for the wildest cattle, including Texas Longhorns, and the trickiest and toughest broncos on the range.

Many of the most notable performers of their generation were at Calgary for that contest and most of the top awards were won by United States cowboys, who had more rodeo experience than the Canadians. One of the exceptions was bucking horse riding, which was won by a Blood Indian from Cardston, Tom Three Persons. The horse he mastered in the contest was the notorious black outlaw called Cyclone, an Arizona terror never ridden before. The Canadian's victory brought great rejoicing.

Hope was that the rodeo at Calgary would become an annual event but circumstances prevented. The next was in 1919, but in 1923 the Calgary Exhibition adopted the Stampede as a feature for its annual summer show. The decision was wise and the Calgary Stampede became the greatest rangeland classic on the continent. Nowhere do broncos buck harder or steers fight more stubbornly than at Calgary, and nowhere do the citizens adopt the roles of cowboys and cowgirls so completely.

Rodeo events have changed and rules somewhat altered, but the main features of the contests remain the same. Contestants are expected to appear in appropriate cowboy garb, and abuse of or cruelty to animals is never permitted.

The bucking horse riding events have changed but little. In these the Association saddle must be used and the rider must come from the chute with both feet in the stirrups. Ten

seconds is allowed for the rider's performance. In his precarious ride he must "scratch" high on the horse's shoulders, hold the single rein or shank in one hand, and hold the other hand high in the air. Actually, riders are invited to make themselves as insecure as possible and those who play safe are penalized.

Bull-dogging was a thrilling event at the earlier rodeos but for humanitarian reasons, it has been replaced by steer decorating. According to story, bull-dogging had its beginning on the Texas range with a negro cowboy named Bill Pickett. Pickett stooped to pick up a bag of tobacco and a Longhorn steer launched an offensive. The negro had no chance to run but he seized the onrushing brute by the horns and wrestled it to the ground.

In bull-dogging contests, the steer was given a start of fifteen feet before being pursued by the mounted bull-dogger and hazer. When he had overtaken the animal, the bull-dogger leaned far over, grasped the horns and slipped from the saddle, at the same time twisting down on the horns so that if he were good enough, he flipped the steer over and forced it to the ground.

In the steer-decorating contests, the competitor is required to place a rubber band with ribbon attached over one horn. The contestant and hazer must leave the chute with the steer and time is counted. At the psychological moment the contestant slips from his saddle and seizes the steer by the horns; he must be free from the horse and have touched the ground with both feet before trying to complete the event. Like bull-dogging, steer decorating would be an unsuitable pastime for members attending a Rotary picnic.

Calf-roping also is a time contest. In it the rider is required to rope the calf, dismount, release his horse, throw the calf, tie three legs, and throw up his hands for time. Wild steer bareback riding could be a good reducing exercise for men over 300 pounds, and the wild cow milking contest is guaranteed to wean the most ardent milk drinker. Bareback bucking horse riding and wild horse races are ranch-grown substitutes for

golf. But for thrills and spills, there is nothing in outdoor entertainment to match the chuck-wagon race.

A chuck-wagon entry consists of a roundup chuck-wagon equipped with stove; canvas fly extending eight feet back from the top of the wagon and fixed with poles and guy ropes; a four-horse team; driver; and four outriders. Outfits take their positions on the infield and upon the starting signal, stove, canvas fly, and poles must be loaded by the outriders, who then mount and follow their outfit. On the get-away, each outfit must complete the figure "8" around barrels set for the purpose before striking the track. It is a half-mile of pandemonium and dust and, barring penalties, the first team to pass under the wire wins.

Perhaps the most distinguished cowboy performer and hero of pre-rodeo years on the Canadian range was John Ware, negro and gentleman, who came with the Bar U cattle, and later set up his own brand, the Four Walking Sticks, said to be originally four nines to commemorate his age at the time the slaves were freed. A good deal might be written about "Nigger John," about his tenacious riding, his good humour, and his popularity. John Franklin, Bill Stewart, Charlie Sharples, and Frank Ricks were other cowboy heroes who lived in the memory of many pioneers.

After the Calgary rodeo of 1912 when the native-born cowboys came off second best, the Canadian range began to grind out more than its share of top-ranking performers. Emery Le Grandeur of Pincher Creek was among the best; he was acclaimed a world champion after conquests on the American side in 1913. Dave White won similar honours in 1918. Pete Vandermeer of Calgary, Leo Watrin of High River, Herman Linder from Cardston, Harry Knight from Banff, Clem Gardner of Calgary, Lund Brothers from Raymond, and Charlie McDonald of Calgary would rank high in international rating. Perhaps Pete Knight was the greatest of them all. He won his first world championship in 1926 and held it for several years. The Rodeo Association awarded him reserve championship in 1930 but in 1932, 1933, 1935, and 1936, he again wore the belt

of the champion and brought honour to the province of Alberta. In 1937, while advancing towards another world title, Pete Knight was thrown and trampled to death by an outlaw horse at Hayward, California.

Strangely enough, another hero of the Canadian rodeo, Lee Ferris, who grew up at De Winton, was buried at Hayward close to his old friend Pete Knight. Ferris was one of the gamest of cowboy performers. He was participating in a steer-riding event at Calgary in 1932 when a horn penetrated his eye. Ferris completed his ride and was taken to hospital where the injured eye was removed. Two days later he was back at the Stampede and riding again. It couldn't have happened anywhere else but at Calgary.

In bucking competitions, horses as well as riders could win fame. Probably the most distinguished buckner in rodeo history on the continent was the black, Alberta-bred gelding called Midnight, the Joe Louis of the rodeo paddock. James McNab of Macleod was the breeder and Midnight came into the public eye, displaying the dynamite that was in him, when Macleod was celebrating in 1924 the fiftieth anniversary of the arrival of the Mounted Police. The horse was taken to the Calgary Stampede and his career as a professional buckner began. In the years which followed he appeared as a feature at the biggest rodeos in the United States and Canada. Pete Knight was one of the few who rode him and it was Knight who pronounced Midnight the "most unpredictable piece of dynamite" he had ever tried to sit on.

The range screened its men, rejecting the misfits and retaining the hardy and resourceful. Those who clung to ranch life possessed a strong individualism. Nowhere could one find such a high percentage of colourful characters, men who had neither time nor patience for convention. They might play poker or polo but not bridge or golf. They drove a hard bargain but were most generous and hospitable. They liked to ride the best horses but cared little what they wore. And wealth, when it came, didn't change them. Thus they were often a source of astonishment, even to the people of Calgary.

One of those unpredictable people whose name is not essential to the story but who was well known in the Porcupine Hills, made a good sale of his fall beef and decided to buy his wife a present. After a long and dusty drive behind the herd, the pioneer appeared on the streets in Calgary. A heavy growth of whiskers and a very greasy Stetson hat made him appear more like a tramp than a business man.

At a fashionable clothing store, the rough-looking cattleman asked to see ladies' fur coats. Reluctantly, the clerk produced a cheap coat, but this was "not good enough" according to the visitor. With still more reluctance, a five-hundred-dollar coat and then an eight-hundred-dollar garment were brought out. The visitor was stubborn, insisted upon seeing the "best coat in the store," and after a most perfunctory display, said he would take it, and offered to make out a cheque. The store manager took another look at the whiskers and the dirty clothes and said, "Positively no." But the cattleman had a trump card. After a casual search through pockets he produced a Pat Burns cheque which he proceeded to endorse. "Well, if you won't take my cheque, you can take a thousand out of this one and give me the change." The cheque which was then tossed on the counter before the astonished sales staff was for the sum of \$90,000. The manager was obliged to admit that he couldn't make change.

Where else except in the Southwest could one find a collection of characters like the "Three K's," Kanouse, "Kamoose," and "Kootenai." Fred Kanouse represented the group which graduated from whisky-trading to cattle. "Kamoose" Taylor of Hotel Macleod said he was the only cowboy in the world who couldn't ride a horse. "Kootenai" Brown was an Eton and Oxford man, who had been a member of the Guards. But nothing he had seen between Buckingham Palace and the blue waters of the Pacific looked so satisfying as the cattle country around Waterton Lakes where he was the first settler and first superintendent of Waterton National Park.

Another who would have blended perfectly with Kanouse, "Kamoose," and "Kootenai," if they had called him "Kansas"

instead of "Dad," was J. A. Gaff, who hailed from Kansas and ranched on the south slope of the Cypress Hills. A friend of Buffalo Bill and "Wild Bill" Hickock, Gaff hunted buffalo on the Kansas plains in the seventies and sold the hides at Dodge City for two dollars each. He witnessed the northward movement of the Texas herds and he lived among men who would "as soon think of walking down the street without their pants as go without a gun or two on their belts." And when an argument occurred, said "Dad" Gaff, "those things used to go off awful easy." It was "Dad" who objected to the rate for a room at the hotel at Govenlock, in southwestern Saskatchewan, and ended the evening's argument by buying the hotel and selecting his own room.

Prominent in the pioneer's book of recollections is a cowboy character by the name of Dave Cochrane. He was not related to the Cochranes of the big ranch, but he had his own way of gaining immortality for the family name. Upon graduating from the ranks of the Mounted Police, he took to ranching and farming and became a source of annoyance to the police and worry to his neighbours who saw his herd growing at an astounding rate. He had a personality which made people like him, but farmer and rancher neighbours never slept peacefully when he was about. When he retired from the force, he squatted on the Piegan Reserve and refused to leave until an arbitration board appointed by Commissioner Dewdney awarded him \$3200 and another homestead.

This experience had educational value because Dave remained on the new homestead only a short time before squatting on the Walrond lease. This time he wanted \$5000 or the award of a Board of Arbitration. After a gentle hint of what could happen to the Walrond range if someone were to "accidentally" drop a lighted match in the dry grass, the Walrond manager agreed to arbitration and again Dave Cochrane collected rather handsomely.

It was while squatting on the Walrond lease that Dave Cochrane acquired his famous stove. As Dan Riley related the story, the police at Macleod received a shipment of supplies,

including a new range which had to be left outside for a time. Dave looked covetously at it and every time he was in town, a leg, a lid, or something else disappeared. When only the heavy frame remained, a pail of water was poured over it one night. The once shining stove took on the colour of rust and the crafty Dave requested permission to haul away a load of junk including the rusty remains of what was once a stove. Permission was granted and after a polishing job, the range was reassembled in Dave's ranch shack. When a police officer visited Dave Cochrane's quarters and enquired about the good stove, he was told by the cheerful cowboy that "it was in the load of junk you invited me to take away."

Dave tried his hand at other things. It seemed that any time he permitted himself to be arrested on a charge of trading in whisky, his containers were found to contain water or kerosene or nothing at all. On one of those occasions, Dave and a string of pack ponies were escorted to headquarters by a self-confident officer. But Cochrane had *two* trains of pack ponies. While the attentions of the police were directed upon Cochrane and a pack train loaded with water, the other pony train, which carried a whisky cargo from Montana, went on unnoticed.

Ed Maunsell related a typical Dave Cochranism. Dave was living at Fort Macleod at the time and Rancher Maunsell was considering the purchase of a second-hand democrat from J. B. Smith. Negotiations were interrupted when it was noticed that an axle nut was missing. Somebody suggested that Dave Cochrane had a good supply of odds and ends and what he didn't have on hand, he could always find. Maunsell went to see Dave and together they looked in vain through Dave's collection of junk. But Dave was not one to desert a friend until a job was finished, so he excused himself, saying that he would be back in a few minutes. Sure enough, he returned with a look of satisfaction on his face and a nut of the proper size in his hand.

Mr. Maunsell took the nut, but he hadn't gone far on the trail before he overtook the Macleod-Fort Benton mail carrier, in great distress. The carrier said he had started out with the

mail, but had lost an axle nut from his democrat and a hind wheel had dropped off when crossing a slough. A search in the cold water of the slough failed to locate the lost piece and the Queen's mail was being delayed. Maunsell sensed a connection between the repair in his pocket and the broken-down mail wagon. He walked back to Dave Cochrane's place to return the nut with the explanation that it was not suitable. Coming back to the mail carrier, Maunsell enquired if it might not be possible that Dave Cochrane would have a nut to fit the axle. The driver's reply was that he had seen Dave just before hitching his team to the democrat and he would walk over and see what help Dave could offer. Strangely enough, Dave found a nut which fitted perfectly, and the Fort Benton mail was soon on its way, although the democrat remained out of action.

Anything could happen in cowboy country and when trouble came, even domestic trouble, it might take a strange form. One spring day when Constable Jamison, in the course of a patrol, rode over to Tommy Till's ranch on Lees Creek, neither the Lincolnshire Englishman nor his wife appeared to be at home. But the policeman's horse needed rest so he tied it in the ranch stable. Then a faint call from a pile of fresh clay arrested his attention. Approaching what proved to be a new well, he found the dejected rancher at the bottom of the twenty-foot hole with no means of escape, as helpless and as desperate as a ranch hand trying to milk a cow. Policeman Jamison pulled the victim from the well, and then learned the circumstances.

"'Twas this way," said Till, "I was down well filling the bucket and old wife was pulling it up with a rope. When she was drawing up a bucket of clay, some stones come loose and they hit me on the head. What I said to the old lass made her mad and she said I could stay down there and get cooled off. She was going to hitch horses to wagon and drive to town. Wait till I get hands on old girl."

But when the lady drove home at a leisurely pace a couple of hours later, she remarked quite fearlessly, "I'll teach old man to swear at me."

However unconventional and varied those pioneers of ranch country may have been, they had two or three admirable qualities in common. They could work overtime without complaint; they depended upon their vigour and resourcefulness, and they would share their blankets or last loaf of bread with one in need.

The latch-string of the ranch-house hung on the outside, even during the owner's absence, and it was considered quite proper for a traveller to provision himself from the larder of a temporarily unoccupied house. But it was contrary to range law to take all the food. Men who were habitually careless about cattle brands never dreamed of yielding to the temptation to take more than half of a piece of bacon or half of the flour found in a cabin. Something was always left for the next traveller or the owner when he returned.

And let there be no mistake about it, loyalty was a conspicuous characteristic in the unorganized fraternity of cowboys. Few could speak with more authority than Senator Dan Riley. This was his tribute, in *Canadian Cattlemen*:

He might be working for some haywire outfit, poorly mounted, poorly equipped, poorly bossed, but his loyalty never wavered. Blizzards might rage, rains turn streams into torrents and the country into a quagmire. It only added zest to his work. . . . Beef herds sometimes stampeded at night. He rode with them in their blind run, well knowing that the next jump might mean death to him. I never knew a man to quit and when the herd was finally circled and stopped, every man was in his place. . . . To the memory of these men, with whom I rode, stirrup to stirrup, for hundreds, nay thousands of miles, my tribute is, that according to their lights, their environment and their limitations, they served well and filled well the place God gave them here.

It is the cowboys who have made the cattle kingdom one of the last frontiers of picturesque romance, with its magnificent setting, its heroic drama, and its own quaint chivalry.

10 *Dress Parade*



FRONTIER regions are marked by two strong trends which at first sight are contradictory: individualism and neighbourliness. As a matter of fact they complement each other. Only the strong and independent, with plenty of courage and initiative, can survive frontier conditions. On the other hand there comes a time when even the strongest is in need of help and when that hour arrives the frontier code demands that aid be given by anyone who is at hand.

Early settlers in the Canadian West were no exception to the rule of the frontier that only the fit can be accepted. It was unfashionable to be ailing in a country where there might be neither medical nor dental doctor within a thousand miles. The most dreaded illnesses were smallpox and typhoid fever, but the most common complaint was indigestion, which could be explained by bachelor cooks and frying pans.

In many districts, seven-eighths of the homesteaders were bachelors who had no reason to boast about their housekeeping or their skill in cooking. Most of them swept the shack out on Sundays and did a laundry job on a rainy day, though there were some bachelor quarters where no broom, clothes-line, nor dish towel could be found. When one of the MacEwan neigh-

bours was caught wielding a broom in his cabin, his observant visitor enquired, "Rod, do you never sweep under the bed?" The reply was, "Sure. Everything!"

Bathtubs were about as numerous as pink horses. A barrel that caught soft water from the roof permitted a sponge bath now and then, but most of the male members of the community depended for their periodic cleansing upon a dip in the neighbouring creek or slough. In the winter a thick layer of ice separated the homesteader from his bathtub.

One old-timer, who was enjoying good health at the age of ninety, remarked that when he made his appearance in the homestead country there wasn't a bathtub in the entire township. "Didn't have a bath for thirty years after the midwife washed me," he said. The modern battle against germs failed to impress him. On that homestead, all occupants used the family drinking dipper, the roller towel, and the comb which hung from a string beside the wash basin.

On a new farm innumerable jobs shouted for attention. There were building logs to be fastened into walls, fireguards to be ploughed, fences to be constructed, sod to be broken, stones or brush to be removed from fields, and wells to be dug. The settler had to race against time, for the main season, which terminated at freeze-up about the first week in November, was far too short. The work of developing a farm had to be done, while the dirty dishes and the sweeping could wait.

The farm homes where there were women were better looked after, for the homestead mothers were both courageous and resourceful. They did wonders in reconditioning old clothes. They made a shack with a sod roof look and feel like home. They made bread that has never been surpassed in goodness. And they made jack rabbit stew taste like chicken. After listening to sympathy because rabbit was the only meat which she and her family had all winter, one of those frontier heroines explained that they did not tire of it because she had discovered fourteen ways of preparing it. Some not so versatile, however, recited the verse:

Rabbits young, rabbits old,
Rabbits hot, rabbits cold,
Rabbits tender, rabbits tough,
Thank you, sir, I've had enough.

Fortitude was a characteristic of the pioneer men and women. None but the stout of heart could have witnessed the desolation produced by hail, drought, and high winds and remained cheerful. One summer afternoon a community gathering was held at a certain settler's home. A black cloud came up from the west and in a few minutes hailstones were driving a promising crop into the ground. Nobody who has not felt it can realize the disappointment that can come from fifteen minutes of heavy hail, with occasional stones as large as a man's fist and many the size of a pullet's egg. When the storm ended, sympathetic guests made ready to depart, but the pioneer mother said, "No, don't hurry away, the children have gone to gather some hailstones and if you'll wait, we'll make ice cream." Honorary degrees have been granted for less.

Everyone knew that homestead country had its hazards. Sometimes red men prowled about, though often they turned out to be less fearful than the settlers expected. Isolation in the event of accident or illness could be serious, and George Shepherd of southwestern Saskatchewan told of one bachelor homesteader whose ladder blew down while he was on the roof of his two-storey house attending to an overheated chimney; since his nearest neighbour was two miles away, he had his choice of jumping to the ground at the risk of a broken leg or whittling a hole through the roof.

The prairie fire hazard caused disturbed days and sleepless nights. Even a good fireguard would not stop the merciless demon riding on a high wind. The sight of an approaching fire struck terror to the stoutest heart. The diary of Stanley Rackham, a Barr Colonist (loaned to the author by Thomas Rackham), contains notes not unlike those which many other settlers might have written.

Sunday, Oct. 18, 1903. Noticed a faint red glow this evening, evidently a prairie fire several miles to the west.

Monday, Oct. 19. Putting roof poles on stable. About midday it grew hazy and smoky with grass ash flying by, showing that the prairie fire was approaching us from the West and in the evening it showed itself plainly, a huge lurid red cloud of smoke. . . . It seemed as if it couldn't fail to strike us but the direction in which the smoke was travelling gave us hope that it would pass to the south. I got very anxious and after supper we both walked over to Blackburn's. They did not seem to think it would reach us tonight and also relied a good deal on the Fort Pitt trail to stop it. We, however, turned in with our clothes on and got up two or three times to see how things were going.

Tuesday, Oct. 20. Wind blowing strongly and at 10 o'clock the prairie fire was racing by, a mile or two to the south and burning strongly to the west. By midday it had reached the town where it was effectively stopped to the north and so kept south of the Battleford trail which formed its northern limit. In the evening we burnt round our hay stacks between the ploughings. Heavy shower of rain about midnight was very welcome and put a stop to all fires.

Unforeseen emergencies might arise during any long trip which the homesteader was obliged to take by ox-team or with horses. Winter travel was particularly difficult, especially in unsettled areas where the traveller was obliged to make a night camp for himself and his team in the lee of a bluff or in a coulee. Stanley Rackham gives a very matter-of-fact account of one difficult trip.

Oct. 27, 1903. Up at day break and made a start at once having breakfast a mile or two from Fort Pitt. When we got to the river . . . had a little difficulty in getting the horses to pull the wagon onto the ferry and had to take them out and get them on first and then put them on the end of the wagon pole. The surface of the ground was already thawing and the steep clayey bank out of the river bed was very slippery but being short, I didn't anticipate trouble with my load. Unfortunately I was mistaken; the horses were almost at the top when they stopped and there being no foothold, the wagon began to roll back. Before I could block the wheels, it had pulled both horses down, one right backwards over his haunches into an indescribable muddle of heads, legs and harness. The ferryman had already got to the far side of the river and there was no one to help me so while I lay on one of the horses' heads, I dodged sundry hoofs and moved all buckles I could get at and then stood clear. Both horses were soon on their legs and apparently none the worse, though a little bit dazed. Luckily also, the harness was hardly damaged. After putting things together again, I carried everything portable to the top of the bank and then made another attempt. . . . Got up the hill all right until I reached the last

and worst part and there about half way up, the horses stopped again and fearing a repetition of the morning's catastrophe, I turned them off the trail into a small ditch where the hind wheels of the wagon got effectually stuck. . . . Some men with ox teams offered to pull my wagon but they were some time before they came to do it and it was past 4 o'clock before I made a start. Decided to push on by moonlight, though it was rather cloudy. About 7.30 I found I was on the wrong trail, having taken the one going down to the east, so camped for the night, first walking back two miles and finding where I had over-run the right trail which was but faintly marked.

John Beames, descendant of a pioneer western family, writes from personal knowledge in *Army Without Banners*, when he makes his characters undergo all these hardships. Based on actual fact is the very moving story of a family of Swedish immigrants who nearly starve to death before the neighbours discover their plight, run up a better shack for them, stock it with food and firewood, and convert the old one into a barn with two cows to give milk for the children.

Illustrating the same frontier response to an emergency is the memory of a certain homesteader who was stricken with appendicitis and had to be removed to a hospital just at the commencement of seeding. On the very next day, five ox-drawn ploughs, six horse-drawn ploughs, two harrow outfits, three seed drills, and a packer converged upon his land and completed seeding operations in short order. Such incidents were repeated hundreds of times.

Sometimes this neighbourly spirit warred against individual interests. When Alex MacEwan sold his farm north of Brandon, he announced the customary auction sale of stock and implements. On the morning of the sale pioneer neighbours gathered to help. Bob Walker and the McCallum boys brought brass-fitted harness, top collars, and rings in abundance, to dress the horses for the sale. When Auctioneer T. C. Norris (later Premier Norris of Manitoba) arrived and saw the stylish display he enquired if there were a ring factory in the district. Bob Walker, instead of talking down the team he himself wanted to buy, braided tails, plaited manes, and so adorned the animals that he was obliged to pay the high price of \$525 for the pair. It was

a just reward that both of the two horses he bought lived to be more than twenty-five years of age.

According to frontier custom, the wayfaring man, no matter what his creed or colour, was made welcome at mealtime or for the night. The lamp was in the window, the latchstring was out, and a meal prepared for two could be stretched to satisfy four. Amid such primitive conditions a neighbour was, as in the Bible definition, anyone whom one could help.

In many pioneer districts, a school represented the first community organization, a church was second, and then an agricultural society. This emphasis on agricultural organization was not surprising since many of the settlers in the early West already knew from experience the value of agricultural fairs and contests. Some had seen the Percheron horse emerge from the fairs and exhibitions of France and some had seen the Jersey breed of cattle developing under the influence of the show-rings of Jersey Island. The immigrant Englishman had a lot to say about the Royal Agricultural Society Show as well as the smaller events in old England; the Scot regarded the Highland and Agricultural Society Show as a Supreme Court on questions of livestock merit; and the man from Peel County made boasts about the Toronto Exhibition. It is no wonder that the little Agricultural Association formed in the pioneer Red River Settlement had many flourishing successors as soon as large-scale settlement began.

The Manitoba Agricultural Society was organized with the approval of the Legislature when the new western province was just one year old. It was designed "to encourage agriculture by importing or procuring all new and improved kinds of grain seeds and animals." An annual grant was provided of about \$2,000 which, along with fees and donations, was considered sufficient to support an active programme. Prizes for agricultural essays were to constitute a feature of the society's undertakings. In 1882 an agricultural society was started at Brandon.

Westward, in the Territories, an Ordinance to Incorporate Agricultural Societies was passed by the Territorial Council, meeting at Regina on November 16, 1886. The objects of a

society, as laid down in the ordinance, were to encourage improvement in agriculture:

(a) By importing or otherwise procuring seeds, plants and animals of new and valuable kinds;

(b) By awarding prizes for excellence in the raising or introduction of stock, the invention or improvement of agricultural implements or machines, the production of grain and all kinds of vegetables, plants, flowers and fruits, home manufactures and works of art, and generally for excellence in any agricultural production or operation;

(c) By offering prizes for essays on questions of scientific enquiry relating to Agriculture, and the best systems of protection against prairie fires.

A fair was the first progeny of an agricultural society and quite a number of places, including Winnipeg, Portage la Prairie, Carman, Prince Albert, Fort Edmonton, and Saskatoon, were conducting fairs long before they had a rail connection with the outside world. The pioneers did not underestimate what an agricultural fair could do for a community.

The small local fair of pioneer years bore but little resemblance to the modern exhibition. A one-day show, it was held on the main street, on a vacant lot behind the livery stable or on one of the many other unoccupied spaces near by. It lacked fireworks and dancing girls, but the contests in fat pigs, herd bulls, farm teams, and Red Fife wheat, were followed with all the eager enthusiasm now shown over the last ends of a Nipawin bonspiel final. Only a little less interest surrounded the classes for poultry, vegetables, and farm-made equipment. And if there was a horse race, all else could be forgotten until the local winner was declared. At one of the early Manitoba fairs, the managing director could not be located during those hours when the conduct of the fair seemed to revolve around him. But as revealed, ultimately, he had not absconded with the prize money; it was simply that a matched race had been announced and he had driven out to his farm, eight miles distant, to get his horse for the contest.

People have always stopped work for a horse race at Portage la Prairie. When a stranger with a fast horse appeared there on May 24, 1877, and made some boasts about its speed, a message

was sent by moccasin telegraph to John Macdonald at High Bluff, to come with his good mare, a descendant of Fireaway. The local people knew her; they knew she must be good because Louis Riel's scouts had once tried to steal her. Macdonald and the mare were busy ploughing when the message was delivered but the ploughing was halted half-way down the field. The mare was driven to Portage and everybody turned out for the matched race. Macdonald's mare, hitched to a four-wheeled buggy, trotted a mile in three minutes flat to give the visiting horseman a humiliating defeat. It was a great victory, about as good as an Allan Cup win today.

Fair day, however, was like no other. Summerfallowing, haying and other farm operations were suspended for twenty-four hours. The farmer-exhibitor loaded crated pigs and hens on a wagon, tied the herd bull and the fattest cows at the rear end of the vehicle, hitched up his best team in freshly polished harness, and hoped the cow-halters would prove strong enough to resist determined bovine efforts to break them.

That first act took place about seven or eight hours before noon because it was important that the stock be delivered before the heat of the mid-morning sun. Early arrivals at the fair had an additional advantage; the first exhibitor on the grounds could tie his cattle and horses to the stoutest fence posts or to the trees offering the best shade.

By the hour of judging, the protesting cattle were almost exhausted but not too tired to try to stampede in the ring when they were supposed to appear domesticated. Bulls which had never been within bellowing distance of each other before, would recognize their rivals, paw the ground, and issue nasty, baritone threats, hoping particularly to impress lady cattle who were obviously more interested in going back to the farm than in any fair-day romances. In an adjacent ring, bounded by a knotted rope hung on shaky willow stakes, the brood mares would squeal fiendishly in fear that their foals would wander too far and get lost. And over in the lee of a bluff, a judge might be trying to adjudicate a class of unhappy pigs without removing them from their crates.

Show-ring strife was sharpest in the classes for farm teams and mature stallions, although inter-neighbour rivalry was only a little less intense in the competition for herd bulls. There was this difference: a herd bull was the pride of its owner alone, while in sentiment for mature stallions whole communities were joined or divided. Each stallion had its following, captained by the proud owner or groom who could recite the horse's pedigree back six generations and considered his charge to be a candidate for World's Fair honours. No judge could satisfy more than the winner of first prize and no judge of stallion classes could feel quite easy until the fair was over and he was well beyond the municipal boundaries.

Perhaps the judging would continue without interruption until completed, but more likely a break was made for lunch. In any case the so-called lunch was an important part of that big day. Along with some homemade bread, a pan of biscuits, and a firkin of butter for the competitions, that famous picnic lunch was Mother's contribution to the local fair. Either the farm family lunched alone or neighbour families pooled their food baskets and feasted together. Blankets were spread where the grass was shaded from sun and then weighted down with good food in farm-sized containers, hard-boiled eggs, home-cured ham, a cold roast chicken, a bucket full of potato salad, thick slices of home-baked bread with a generous spread of butter, raisin pies, and cold tea. Mother had estimated the reasonable requirements and multiplied everything by two; the net result confirmed the excellence of her judgment.

When judging was over, everyone made a tour of inspection. This was not to be done in haste. The first-prize winners in livestock and grains and vegetables were compared with the second and third entries and the judge was commended or castigated. At a time when no experimental farm or extension service or college of agriculture was available for assistance and advice, that local fair took the place of all three.

The earliest fairs in the West were held beyond the Rockies. Victoria, which was the centre of a little farm community struggling to produce enough food supplies for the traders on

the coast, led the list. Victoria's first fair was held at the Victoria Market on Fort Street on October 2, 1861. Judging took place in the morning, an auction sale in the afternoon, and a band concert and banquet ended the day. It was a noble beginning. New Westminster came next; it conducted its initial fair in Confederation year. Both of these early fairs were fore-runners of important annual exhibitions.

Winnipeg might claim to have held the first fair between the Red River and the Rockies although at the time of the show, October 4, 1871, the little metropolis at the junction of the Red and the Assiniboine was still known as Fort Garry. Exhibitors had made 500 entries. But Winnipeg, it seems, was destined to exhibition troubles and on this occasion word was received that Fenian raiders with cocked guns had crossed the international border. The fair ended almost before it was started, and cattle and sheep were dragged home before the mighty judgments of the show had been delivered. After this discouraging beginning, Winnipeg required many years to muster the enthusiasm to try again. Between 1891 and 1914, Winnipeg conducted an impressive Industrial Exhibition, but again the end came on a sour note. The Exhibition was in debt and the management under fire. Neither the city fathers nor the ratepayers were sympathetic to the point of furnishing bigger financial grants. The Exhibition directors announced that they could not continue, and the Winnipeg Industrial passed into history. It is to Winnipeg's credit, however, that the Gateway City had the first Seed Fair in the West, in 1880.

Of the Western Canada fairs and exhibitions operating at the mid-point in the twentieth century, Portage la Prairie could claim the longest continuous record of service to agriculture and the community. Settlers organized the Marquette Agricultural Society on May 30, 1872, and elected that stalwart pioneer, Kenneth McKenzie, as president. They decided to hold a fair on September 25 but a storm caused postponement until October 16th. It was a good fair, and the *Manitoba Free Press* offered congratulations. There were classes for grain, vegetables, dairy

products, livestock and such articles of home manufacture as deerskin moccasins, woollen socks, wheat flour, vinegar, sugar from Manitoba maples, Red River carts, straw hats, and canoes. It is of more than passing interest that Western Canada's first two breeders of pure-bred Shorthorns, Kenneth McKenzie and Walter Lynch, were competing at that Portage la Prairie fair. Next year McKenzie won the wheat class with Gold Drop variety. The sheep were mostly Leicesters and the pigs were Berkshires. Lynch and McKenzie divided the honours in "Durham cattle."

Portage la Prairie held the provincial exhibition in 1883 and two years later, the Agricultural Society sponsored a ploughing match. The Directors of the Society could not know that this ploughing match was to be the forerunner of the biggest annual event in Western Canada, sixty-five years later. Portage la Prairie's fair had its ups and downs but it never lost its leadership in a big and productive community. It witnessed mighty changes in the varieties of plants, breeds of animals, types of machines, and in farm practices generally, and was a part of each.

At Fort Edmonton, a thousand miles from the end of railway steel, a fair was held in 1879. This settlement on the North Saskatchewan had been important in the fur trade, and the pioneer fair was held at a period of transition between furs and farming. The men who lived by furs were reluctant to admit that the end was coming and very few with interests in farming had considered a site so far from Winnipeg, when they could choose from thousands of square miles of more accessible land. But some forward-looking people were about, and the Edmonton Agricultural Society was formed.

No government grant was given and no source of revenue was available except donations. A vigorous canvass produced \$323 of which \$173 went for prizes at the first fair held on October 15, 1879. The Society had no real estate but Chief Factor Richard Hardisty offered two rooms in the Hudson's Bay Company fort for the display of inside exhibits, and a big

yard outside for the horses and other livestock. Not many animals were shown but vegetables were said to be particularly good. The carrots measured up to two feet in length and Society directors took the precaution of having them measured officially (to prevent Calgary later claiming any unjust records on specimens of a mere foot and a half or so in length).

Edmonton's show was the first of the present-day circuit of Midwestern Exhibitions. Between 1882 and 1886, however, the other four exhibition members of the Big Five, Brandon, Regina, Calgary, and Saskatoon, were born. In each case it was a lowly birth. It could not be otherwise in a new district.

When Brandon held its first fair, just about a year after the townsite was located, entries were anything but impressive. The only worthwhile competition in livestock was in the horse classes and most of the animals entered were from the teams that hauled farm wagons to town that day. The seed grain entries were even less imposing but a resourceful and not over-scrupulous director repaired to the local elevator and borrowed enough samples of wheat and oats to fill the classes.

John Mawson, who homesteaded at Moose Jaw and later lived at Dundurn, was an exhibitor at Moose Jaw's first show in 1884, and carried away four major awards. He won first prize for home-made bread (presumably Mrs. Mawson's make), first for baby daughter (in which Mrs. Mawson was equally interested), first for calf, and first in the ox-team race staged on the main street.

Prizes were humble enough and nobody exhibited to get rich. Saskatoon's prize list illustrates this. The first fair at that isolated community, 150 miles by trail from the nearest railway at Moose Jaw, was in 1886, just four years after the Temperance Colony people arrived to locate their land. For the best herd of Shorthorn cattle, the reward was a diploma and a dollar. In the one-mile horse race, the top award was a dollar and in the two-mile race, two dollars. A dollar a mile, evidently.

Joe Caswell was a director and an exhibitor of livestock at that first show in 1886; the same pioneer exhibited pure-bred

Jersey cattle at the Saskatoon exhibition exactly fifty years later. According to Caswell, when the class for the Best Walking Team was called at the first fair, Stanley King entered with his oxen. The horsemen protested. (A protest from the horsemen is not an unheard of thing even in these later years.) But the committee ruled that two oxen made a bona fide team and King won the class. There was also a class for the best trotting ox hitched to a buckboard and first prize was one dollar.

W. H. Trounce evidently knew the agony that went with "baching" on the homestead. He was inspired to offer a pound of tea as the prize for "the best loaf of bread, 2 pounds or over, made by anyone keeping bach." As an advocate of big loaves, Trounce would have little patience with the modern one-pound loaf which almost disappears when a hungry man takes two meals off it. And he was anxious that men and women be clothed as well as fed; a minute dated September 6, 1887, reads,

Moved by Smith, seconded by Garrison that Mr. Trounce's offer of 50 cents for prize for best darned stockings and 50 cents for the best patched pants be accepted. Motion carried.

Nobody was embarrassed by big salaries, as a minute from meeting of February 14, 1888, would show:

Moved by Copeland, seconded by Garrison that \$6 be paid to the secretary for services rendered during 1887. Mr. Horn objected to the principle but the motion was carried.

That early Saskatoon society interested itself in all phases of the settlers' welfare. The constitution provided for every conceivable contingency, even disciplinary measures for directors found guilty of immoral conduct. The society worked to get a co-operative store and a grist mill. It fixed the price of custom threshing. It studied the possibility of shortening the 155-mile trail to Moose Jaw. It gave advice on all sorts of topics including the best methods of employing spare time during the winter. And on February 9, 1885, Thomas Copland presented a paper on "Application of Theory to Practical Farming." They were really trying.

Calgary's first fair was held in the same year as Saskatoon's, and suffered the usual tribulations in filling classes and financing. In August 1884 the *Calgary Herald* had advocated the formation of an Agricultural Society and Exhibition for the district, and proposed that winning exhibits from such a local fair might be sent to the eastern provinces to demonstrate what the Territories would grow. At a meeting in Boyton Hall, J. D. Geddes, member of the Council of the Northwest Territories, had pointed out that the proposed society might qualify for a grant of \$200, and an agricultural society was organized in the next week. A site for a fair grounds had been obtained from the Canadian Government in that year.

In securing the site, an obstreperous horse and an injured Deputy Minister from Ottawa played important parts. The Deputy, it seems, was on a hunting expedition south of Calgary when he was thrown from his mount and left to nurse some broken bones and a seriously wounded pride. Major James Walker of Mounted Police fame happened by, rescued the high-ranking civil servant, and took him home. Major Walker, who was a strong supporter of the Agricultural Society, chose the best possible time to present the need for a Fair Grounds and the Deputy Minister of the Interior found himself in the poorest possible position to refuse. The result was that the society bought 94 acres from the Government, at \$2.50 an acre, and gave a guarantee that the property would not be subdivided into town lots.

The first Calgary Fair was held on October 19 and 20, 1886. A \$900 prize list created widespread interest and classes were established for blood horses, roadsters, heavy draught horses, Durham cattle, cattle other than Durham, sheep, pigs, poultry, grain, roots, vegetables, flowers, dairy produce, ladies' work, and agricultural implements. A fall of snow the day before the show reduced both exhibits and attendance, but about 500 people were present to see the exhibits and contests.

One of the feature competitions was a baby show, which at one stage threatened to be more dangerous to human life than a modern steer-decorating contest. As mothers and babes with

various degrees of skin pigmentation took their places to be judged, hopeful fathers stood at the ringside, admiring their offspring and casually fingering the "six-shooters" that hung from their belts. Judges and directors felt a sickening uneasiness, and well they might. They had to think quickly. But those who come under the spell of the Chinook winds are both sharp and versatile, and, recalling that no sheep had been entered, directors authorized the immediate transfer of prize money and prize ribbons from the Sheep Department to the Baby Department. The result was that each little lamb received a red ribbon, each mother received a cash prize, and there was no shooting.

The Calgary Agricultural Society had more than its share of financial difficulties in early years, and in 1896 the fair grounds were sold to satisfy a mortgage. For several reasons no fair was held, but ultimately the property was bought back by the city of Calgary and a new working arrangement was made with the society for the conduct of its annual programme. From that time forward, the Calgary Fair experienced unusual growth and expansion and became one of the best known exhibitions on the continent.

The biggest attempt of its kind in the pioneer years was the Canadian Northwest Territorial Exhibition at Regina in 1895. Regina had been holding annual fairs from 1884, but the event of 1895, which had Canadian Government support, was hailed as a "Little World Fair." It was to be "an education for twenty-five cents." Farmers from many parts of Manitoba and the Territories attended and exhibited and the general conclusion was that the show had been most effective in demonstrating western productivity. But the Territorial Exhibition left Regina exhausted and it was some years before an annual programme was resumed. Reorganization followed, however, and the directors began the struggle again. Financing was difficult and when the Board wanted \$600 for new buildings, two of the directors gave their personal guarantee.

But Regina's Exhibition grew, just like the other western institutions of its kind, and forty-nine years after the first Regina fair with an attendance of 150 people, that city was host to the

World Grain Show (1933). The global show, held on the Regina Exhibition Grounds, was an all-western triumph, and attracted visitors and exhibits from scores of countries. To win the \$1,000 for the best 50 pounds of red spring wheat, Freland Wilford from Stavely, Alberta, placed over 295 entries in the class. And to win first in the class for 10 bushels of hard, red spring wheat, the entry from former world wheat king, Herman Trelle, placed over 164 exhibits.

It was a Western Canadian triumph both for the fairs and for the prairie soil, just as an Exhibition and Stampede attendance of over 400,000 at Calgary's 1949 summer event was a triumph when compared with the attendance of 500 recorded for Calgary's first.

Finding acceptable judges for those early exhibitions was not an easy matter. Few were qualified and fewer carried the variety of life insurance which would shield them from irate exhibitors. Exhibitors must have been more jealous then than in recent years, because formal protests were so numerous that in some instances, according to James Wilson, an exhibitor at Regina's Territorial in 1895, the committee that passed upon protests had as much work as the individual or committee doing the judging.

There were other types of agricultural fairs, spring fairs and winter fairs, whose contributions were equally impressive. The winter fairs and fat stock shows started years later than the summer events. Sponsored by the Rockwood Agricultural Society, a fat cattle and seed fair was held at Stonewall, Manitoba, on December 20, 1882. There were classes for fat cows, fat steers, and fat heifers, and \$10 was the handsome first prize in each case. Minnedosa and Brandon held cattle fairs for market stock in 1884, and Winnipeg conducted Christmas Market Shows with some resemblance to winter fairs for a number of years.

Those cattle fairs became numerous and stallion shows were popular, but spring shows and winter fairs with a broad programme did not operate until after the beginning of the

century. New Westminster and Neepawa held the first of such shows early in 1904 and J. D. McGregor, who had attended the first International Fat Stock Show at Chicago in 1900, was determined that his city of Brandon would embark upon such an enterprise. Brandon had held spring stallion shows annually for years, but a public meeting in 1907 formed a joint stock company to erect a winter fair building and conduct a winter fair. The first of a long succession of winter fairs was held in March 1908.

From the very beginning the Brandon Winter Fair was the scene of Western Canada's most bitter battles for supremacy in draft horses. Many of the leading stallion importers and dealers were located at Brandon and the most coveted championships of the year were those awarded in the Clydesdale stallion classes in that city.

It was at the Brandon Winter Fair that the junior calf-feeding contests and, indirectly, the baby beef clubs, now continent-wide, were started. Again it was J. D. McGregor's idea, but friends like Joe Donaldson furnished encouragement. The contest of 1914 brought out only seven boys and their fat calves, but it was the first of its kind at Brandon and first on the continent. Next year, the prizes were extended and 36 juniors entered the competitions. The benefits of this contest, in increased interest in livestock, reached the seniors as well as the juniors.

Regina had the first typical winter fair in the Northwest Territories, but the other cities followed the example quickly and helped hasten the changes in cattle and other livestock types. Big Ben, the steer that won the sweepstakes at the Provincial Exhibition at St. Boniface in 1886, weighed a tidy 2,650 pounds. Evidently he was regarded as a producer's model. But ideals changed quite rapidly; when J. D. McGregor's grand champion steer at the Chicago International Fat Stock Show of 1913 was brought back to occupy a stall of honour at the Brandon Winter Fair, farmers and butchers saw a specimen which

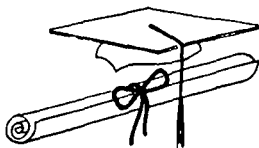
for compactness, smoothness, and quality, was as singular as Big Ben had been for massiveness. And the fat beeves that topped the new Boys' Calf Classes, were of the 800-pound to 1,000-pound order. It was an important change and the winter fairs did more than any other agency to shift the emphasis from size to quality.

The spring shows coincided generally with the season when herd bulls are bought and sold and it was natural and logical that a link would be established between the shows and the annual bull sales. The most famous bull sale in Canada and one of the most famous in the world is held regularly in conjunction with Calgary's spring show. Again, it is a story of steady and rapid development. At the first sale, organized by the Territorial Pure Bred Cattle Breeders' Association, in April, 1901, in the Frontier Stables, 64 bulls were listed. Buyers were offered free delivery of their purchases, but notwithstanding such an inducement, the average price was only \$85.17. The highest price paid was \$250 and the lowest was \$35. But at the 1949 sale in Calgary, 1,002 bulls of the three leading beef breeds changed hands at the average of \$638.99. The 685 Herefords averaged \$693; the 172 Shorthorns, \$529; the 145 Aberdeen Angus, \$510. At the fifty-first Calgary Bull Sale in 1951, the results were no less remarkable, with 728 bulls of three beef breeds selling at the history-making average of \$1120. This was in an area in which, only seventy-five years before, Indians and buffalo had held complete domination. It was a good illustration of the phenomenal advances that had occurred within the memory of old-time ranchers like Herb Miller and Harry Maunsell and Rattlesnake Pete.

Yes, competition adds punch to many human endeavours and the contests which went with fairs and exhibitions did much for agriculture. But they were more than contests. They were show windows that demonstrated what western soil could produce. Rural and urban people met at the fair or exhibition and discovered common interests. Overworked people found

recreation. New farming methods were discussed, new seed or stock purchased, and new machinery ordered. The energetic, optimistic, almost reckless spirit of the boom years was a social product, and such social undertakings as shows, seed fairs, and cattle sales played an important part in the agricultural revolution which took place in the Canadian West during the last two decades of the nineteenth century and the first two decades of the twentieth.

11 *Education and Experiment*



"AGRICULTURE," declared Sir Wilfrid Laurier, "is not only a work of the hands but a work of brain. It is an art which should take a foremost rank in the curriculum. It is the finest of all studies and sciences." It did not take long for the farmers of the western wheat and cattle empires to recognize the truth of this. At first a homesteader with a degree or a library was likely to come in for a good deal of livery-stable ridicule. It seemed fairly clear that hard work and bull-dog determination paid bigger practical dividends than could be expected from a college diploma, and a man couldn't live on culture any more than he could breakfast on love. But changes in soil, machines, parasites, climate, and merchandising methods began to call for skill. Agriculture began to demand workers who were trained and educated along broad lines. There came a realization that farming people required a working knowledge of science and that a broad education, embracing cultural subjects as well as technical, was as much needed by farmers as by lawyers and dentists.

Science and farmers are destined to be partners in the world's principal business, that of producing human food. The man on the land needs all the educational preparation possible

if he is to protect the soil, which is the greatest of all natural resources, maintain its productivity, avoid loss by erosion, control plant diseases, out-guess the parasites that attack plants and animals, prevent malnutrition and breeding failures in livestock, understand and repair all the mechanical aids and electrical gadgets on a modern farm, meet a hundred commercial and operational problems which arise daily, and take a philosophical and christian view of the golf-playing insurance agent who does less work, drives a bigger car, and drops in unannounced for Sunday dinner.

A Scientific Society was organized at Fort Garry exactly thirteen years before the creation of Manitoba as a province. It was the Institute of Rupert's Land; Chief Factor McTavish was first president and Dr. J. C. Schultz first secretary. From this pioneer society came the earliest recognition of the need to study agriculture in the new land.

The next reminders about the necessity of an academic approach to agriculture and the problems presented by the new West, came from the public press. The *Nor'-Wester* was the first paper published at Fort Garry. From December 28, 1859, when it ran its first issue, it encouraged organization and better methods in farming. The *Nor'-Wester* was published fortnightly by two Englishmen, William Buckingham and William Caldwell, on a printing press delivered by Red River cart.

Other papers appeared and disappeared. Few did as much to mould agricultural opinion and encourage study of methods in pioneer years as the *Manitoba Free Press*, and the *Saskatchewan Herald*. The former began publication in Winnipeg in 1872 and the latter at Battleford after Patrick Gammie Laurie carted a printing press over the rough trail from Winnipeg in 1878.

The first formal education for agriculture on the continent was given at Michigan State College; in Canada, at the Ontario Agricultural College in Guelph, beginning in 1874. A farm bought at Mimico, close to Toronto, for this purpose was abandoned following an election and a change of government.

Reasons given were thistles and closeness to a big city. Something might have been done to destroy the thistles but legislators, even in that period, realized that nothing could be done about Toronto, and the temptations and evils to which it would expose young and untarnished men from the farms. Besides, a stand against thistles and sin would be well received by voters in rural Ontario, and land was available at Guelph, a place said to be noted for "the strong moral and religious tendencies of its people."

An agricultural college of a sort, intended for the training of British boys who might farm in Canada, was started at Fort Qu'Appelle about 1881. But the real pioneer of the West was the Manitoba Agricultural College. The Ontario principle was accepted that the College of Agriculture should be separated by "a safe distance" from the University where the faculty might teach evolution and students smoke cigarettes.

Manitoba's legislature passed an act in 1903 to provide for an Agricultural College, and in the autumn of 1906 the first class of 84 young men entered at the Tuxedo site, on the westerly outskirts of Winnipeg. Each of the students parted with cash payments totalling thirteen dollars, five for tuition, five for contingencies, and three to pay one week of board and lodging in advance.

W. J. Black was Principal and Professor of Animal Husbandry; W. J. Rutherford was Professor of Agriculture, and W. J. Carson was Professor of Dairying. These, along with four lecturers, F. Torrance in Veterinary Science, F. W. Broderick in Horticulture, G. A. Sproule in English and Mathematics, and A. R. Greig in Mechanics, comprised the teaching staff.

The original Manitoba plan was for a two-year course of studies, but at the end of two years, the decision was made to provide a course of five years, leading to the degree of Bachelor of Science in Agriculture. From the first class, ten young men completed the requirements and received their B.S.A. degrees in the spring of 1911. First in the line was youthful Walter

Crawford from North Brandon, who thus received the first B.S.A. degree to be issued between Guelph and China.

Instruction in Home Economics was offered by the Manitoba Agricultural College in 1909, but it was several years before the course work was given at the degree level. The first graduating class, comprising six young women, received degrees in 1918.

The Tuxedo site proved inadequate and in 1913 the Manitoba Agricultural College was transferred to the Fort Garry location, on the south side of the city of Winnipeg, where it was ultimately welded in body and spirit with the University of Manitoba.

In 1907, two years after the birth of the province of Saskatchewan, an act to establish the University of Saskatchewan was written into the provincial statutes. The new university was to have a College of Arts and Science and a College of Agriculture. But what should be the relationship between the two? Public opinion said the two colleges should be separated, but Dr. Walter C. Murray, the new president, had another idea. He would place the Agricultural College and the Arts and Science College side by side at the heart of the university. A university created by the people could not afford to neglect the people's chief interest. Yet his students would be offered broader opportunities. His wise and far-seeing words laid down a programme worthy of the generosity and progressive spirit of the West:

In a province destined for many years to be predominantly agricultural, the Provincial University should place the interests of agriculture in the forefront, or renounce its title to provincial service. . . .

But, if our University is to serve the province in the things that abide, it should provide both the schools of science where mastery over nature is taught, and the schools of the humanities where men learn the purpose of life and the art of living. It should conserve the best of the past and meet the needs of the future.

Alberta decided to begin with Schools of Agriculture that would offer practical courses for young farmers. These were to be the responsibility of the Department of Agriculture, and in

1913, when Hon. Duncan Marshall was Minister, such schools were started at Olds, Claresholm, and Vermilion. Two years later, a College of Agriculture was set up within the University of Alberta, and in 1920, three more schools, at Youngstown, Gleichen, and Raymond, were started. The schools afforded farming education for young men and home economics for young women. They served well but it became apparent that all were not needed and some were closed; those at Vermilion and Olds remained open through the years.

Agricultural education took other forms also. Each of the provinces organized to carry agricultural advice to farming people through Departments of Extension. In some cases the work was assigned to the Provincial Universities and in other cases to the Departments of Agriculture. It was agricultural education carried to the barnyard and the community hall. The technical agriculturist, who was viewed with some suspicion in the early years, soon became a recognized partner of the man on the land.

But long before the western provinces had established schools of agriculture the work of William Saunders, first Director of the Dominion Experimental Farms, was bringing science into the service of the farmer. Plant breeding was his chief interest, and recognizing the crying need for an earlier wheat, Saunders carried a search for appropriate varieties to many parts of the world. Each kind he tested at Ottawa. Some were too late; some were not good for milling; some were poor yielders. One after another was discarded; it looked as though Canadians must create a new variety to fit their own needs.

A crossing programme was started in 1888 and much of the technical work was done by Saunders himself and his two sons, Charles E. and A. P. Saunders. For parent strains, Ladoga, a bearded wheat from Russia, Hard Red Calcutta from India, and Red Fife, were used extensively. The elder Saunders made the crosses from which Preston and Stanley varieties came and A. P. Saunders brought together the parents of Huron and Percy. Of these, Preston and Huron were introduced to the West in the

nineties but they were deficient in milling qualities and did not last. The new wheat which the West needed and wanted was still undiscovered.

Charles E. Saunders became Dominion Cerealist in 1903. With a Vandyke beard, a pair of spectacles, and an endless fund of patience, this scientist began immediately to revive the search for better wheats. His first step was a re-examination of the crossbred lines, including some lost strains which he literally discovered on a dust-covered shelf in an Ottawa storage space.

Among single-headed selections made in that year of 1903 was one which came from a Red Fife father and a Hard Red Calcutta mother, mated at Agassiz eleven years before by A. P. Saunders and Thomas Sharpe. Charles Saunders was impressed. The seed from that head was marked for special attention. When the next crop was harvested, Saunders applied his "chewing test" for gluten strength and milling and baking qualities. Elasticity in the wheat gum indicated ability to make a big loaf and colour of gum was a clue to colour of flour. By every test, the new strain was good.

But it had to prove its worth under the trying field conditions of Western Canada. After the harvest of 1906, seed totalled forty pounds and twenty-three of those pounds were sent to the Indian Head Experimental Farm where Angus MacKay was superintendent. Said the Dominion Cerealist, "That canny Presbyterian MacKay is hard to convince. I want him to be the referee."

Two or three days after the seed arrived at Indian Head, near tragedy occurred. Somebody stole the bag containing those twenty-three precious pounds of wheat. Everything seemed to indicate that it was somebody who recognized the possible value of this prize, probably somebody working on the farm. But the superintendent didn't "blow up" and he didn't call the police. He did call his men together and issued a reasoned appeal. Here was seed which might bring relief to the struggling settlers right across this country and to the hungry

people beyond Canadian shores. Said MacKay, "The storage granary will be unguarded and the door unlocked tonight." The appeal proved MacKay's wisdom because the next morning the bag of seed, all twenty-three pounds, was back in its place.

In 1907 and 1908, this wheat grown under MacKay's supervision gave a good account of itself. It outyielded Red Fife and was six days earlier. In one of those trial years, only the early maturing wheat escaped a late August frost and the merits of Marquis were increasingly plain. MacKay was not one to jump to conclusions but in 1909 he gave approval and distribution of Marquis was commenced.

The superior qualities of Marquis were recognized quickly. It was the favourite topic of conversation as farmers met in the livery stable or around the big-bellied stove in the general store. As fast as seed could be supplied, it swept over the prairies, east into Manitoba, west to the Foothills, south to cross the International Boundary, and north to force back the limits of wheat production, just as earlier varieties of corn had extended the bounds of the corn belt in the United States. Everywhere it replaced its parent Red Fife and won a dominant position in the continent's spring wheat belt.

If Marquis needed anything more to increase its standing in the community, it got it in 1911. Charles Saunders, later Sir Charles, heard about the pint-sized Englishman up Rosthern way who had a flair for crop improvement. A five-pound sample of the purest Marquis was mailed to Seager Wheeler. He was keen and, under his watchful eye, the wheat yielded abundantly of hard, plump, red kernels. A sample was sent to the Provincial Seed Fair and won. But it took a lot of persuasion to induce the little homesteader to send the wheat to the New York Land Show that fall.

The feature prize at the International Show was a one thousand dollar gold cup offered by James J. Hill, President of the Great Northern Railway. Sir Thomas Shaughnessy, then President of the Canadian Pacific Railway, challenged Hill to

throw the competition open to all comers. Hill declined and the Canadian said, "All right, we will offer \$1000 in gold for the best red spring wheat grown on the continent." Wheeler was the winner and agricultural people everywhere said "Marquis, eh?" It was the beginning of a long series of championships for Wheeler, for Marquis, and for western soil.

For almost thirty years, Marquis was the standard variety of spring wheat. But the task of the plant breeder is never finished, and Marquis was used extensively to get new and better types. Of a number of varieties including Ceres, Thatcher, Reward, Canes, and others which came upon the scene, Marquis was a parent.

Of course, the plant breeder's work was not restricted to wheat. His task was continuous and he managed to do unbelievable things with oats, barley, corn, forages, vegetables, fruits, and ornamentals.

New breeds of livestock are slower to develop than plant varieties; few have originated in Canada. The Canadian breed of horses and the Canadian cattle were developed in the province of Quebec, while the Romnellet sheep have the best western claim to breed status. But as soon as the expanded farming community could consider quality, Western Canada began to import British breeds for grading up. In the case of certain breeds, Hereford for example, the stockmen on the new soil revised the type to fit the domestic need.

Apart from the Thoroughbred stallions Fireaway and Melbourne and a trio of Ayrshires imported by the Hudson's Bay Company in 1848, which made no lasting impression, the first herd of pure-bred livestock between Red River and the Rocky Mountains was founded by Kenneth McKenzie and his unpredictable son, Adam. The elder McKenzie was one of those who discovered the good soil at Portage la Prairie, and when he came in 1868 he brought with him a Shorthorn bull calf called Baron Solway. The bull remained in the McKenzie herd for more than ten years and many of the male offspring went to head Manitoba herds. Adam McKenzie secured more Shorthorns from the

East in 1873, driving them overland from St. Paul in Minnesota to his father's farm. Shortly after Kenneth McKenzie became established, Walter Lynch of Westbourne brought Shorthorns from Ontario.

Young John Barron from Elora, Ontario, settled on a homestead on the Carberry Plains in 1878; and four years later he bought a registered Shorthorn heifer, Lady Fairview. It was an important foundation; a Lieutenant-Governor, who is expected to turn the first shovelful of dirt for a new City Hall, should have been present to lift the first forkful of hay. John Barron extended his herd by purchasing Ontario heifers. In buying bulls, he was most difficult to satisfy; in Topsman, he got one of good type, with a bad disposition, but one which did much for Barron and for the breed.

Shorthorns had an advantage from the beginning in the West because the breed was a favourite in Ontario from whence many of the settlers came, and it was well known to the immigrants from the Old Country. Gradually the breed spread over the farming districts, and stock from John Barron's herd went out to extend the work of improvement.

Perhaps the best known figure in Western Shorthorn society was James Yule, who came from old Aberdeenshire to manage the Ontario herd of John Dryden. After a few years he journeyed westward to direct Shorthorn breeding for Premier Thomas Greenway at Crystal City, and from there he went to the Van Horne farm at Selkirk. Another change came in 1911 when he was given the responsibility of managing one of the best early herds assembled in Canada, that of L. H. Emmert, at Oak Bluff.

Shorthorn breeding progressed wherever Yule was employed. It was he who selected the American-bred bull Browndale, by Avondale, and brought him to Manitoba; and it was while Yule was at Oak Bluff that the celebrated Gainford Marquis was bought by Emmert. Gainford Marquis and Browndale were the best breeding bulls in Canada in their time and that

they were in one herd at the same time is more than coincidence.

Exactly 70 years after Kenneth McKenzie drove or led the first pedigreed Shorthorn into Western Canada, an Alberta-bred Shorthorn steer, Killearn Lord Rothes, won the grand championship at the Royal Winter Fair at Toronto for the University of Alberta. He was pronounced the most perfect specimen that had been seen in the steer classes at that show. And 80 years after the arrival of the McKenzie bull, Claude Gallinger of Alberta sold 35 bulls of his own raising at an average price of \$1750.

Robert Hall of Griswald was the first in the West to breed pure-bred Aberdeen Angus; Hon. Walter Clifford of Austin, Manitoba, began a short time later. But the breed was to find its greatest champion in James D. McGregor of Brandon. At one time or another McGregor, who had arrived in Manitoba as a small boy in 1877, was homesteader, cowboy, gold commissioner in the Yukon, food controller, and ultimately Lieutenant-Governor of Manitoba. But the honour which he held dearest came in 1928, when his portrait, life-sized, was unveiled in the gallery of the Saddle and Sirloin Club in Chicago, to hang with those of Cruickshank, McCombie, and other giants in the cattle world.

As a young man, in 1889, Jimmie McGregor watched the Hon. Walter Gordon-Cumming import about 40 Aberdeen Angus cows and three bulls for the Quorn ranch in Alberta. There were many good animals in that shipment of beefy black polls. McGregor entered into a working partnership with Gordon-Cumming, later buying the entire herd and taking it to Brandon.

Returning from the Klondike in 1904, "Big Jim" McGregor threw all his energies into cattle raising on his Glencarnock farms. They furnished the first Aberdeen Angus cattle seen at a number of the western shows, a show herd being out annually from about 1906.

Signal honours came to Glencarnock in 1912. McGregor made bold to take entries from his new herd to the International Livestock Show at Chicago, the great American stronghold of the breed. Manitoba people said he was "pretty ambitious," but this is what Glencarnock won: Leroy 3rd of Meadowbrook was grand champion bull; Violet 3rd of Congash was reserve grand champion cow; Queen Rosie of Cullen was first prize two-year-old; Glencarnock Victor won the coveted grand championship for steers, while the Glencarnock entry was first for Aberdeen Angus herds. Then to demonstrate that what he had accomplished with Manitoba cattle and Manitoba feed was not an accident, McGregor in the next year fitted the steer, Glencarnock Victor 2nd, and again won the supreme championship at the International. It was the first time that any breeder had won two supreme awards for steers in succession, and the first time that beef from Western Canada had triumphed in big-league competition. It was not to be the last.

Glencarnock imported extensively and brought to Canada the noted bull, Evreux of Harvieston. Edward of Glencarnock and Blackcap McGregor were equally celebrated home-bred bulls. In 1921 McGregor purchased Blackcap Revolution at the Escher and Ryan sale for \$4000; after two years in service at Glencarnock, the bull won the grand championship at the 1923 International and sold for \$15,000.

Nobody on the North American continent did more than J. D. McGregor for the Aberdeen Angus breed. McGregor also conceived the idea of junior calf clubs, helped to organize the Brandon Summer Fair and Winter Fair, and grew the first alfalfa in those parts.

Hereford cattle, destined to domination on the ranges, made an unobtrusive entry while the Shorthorn people were looking the other way, but they were quick to adopt the new grass as their own. They improved in beef-making qualities, lost their English accent, and developed a western character. It all happened so fast that native Herefordshire could not keep pace

and had little or nothing further to offer to the breeders of the West. The centre of Hereford breeding shifted from Herefordshire to some undetermined point between Calgary, Alberta, and Denver, Colorado.

Just when the first Herefords of pure breeding were brought to the West is not clear but it appears that the Sharmans of Souris were the Manitoba pioneers and Mossom Boyd of Prince Albert was first in what is now Saskatchewan. Senator Cochrane took a few Hereford bulls to the foothills in 1881, purely as an experiment, but there is no record of any pedigreed female stock being taken to Alberta territory until the middle nineties. It was a relatively late start and at the Calgary Cattle Sale in 1902 there were only 14 Hereford bulls compared with 150 Shorthorns.

Mossom Boyd, of Bobcaygeon, Ontario, and Prince Albert, N.W.T., was one of the first to consider the development of a polled strain of Herefords. "Horns," said Boyd, "are as useless to beef cattle as dancing shoes to a Methodist." He had a flair for crossing; he crossed Aberdeen Angus and Herefords and then became interested in the domestic cattle-buffalo cross and was one of the first to do such hybridizing.

Farming operations on the Mossom Boyd property south of Prince Albert were started in 1891, and Herefords were added two or three years later. Two Polled Hereford bulls, the first to come to Canada, were imported from the United States in 1904. The herd had 500 Herefords in 1905 when W. R. Logan took charge. The best cows were mated to the imported bulls, Variation and Wilson, two of the originals provided by Warren Gammon in 1901 and 1902; Variation was considered second among early polled sires only to Giant, a bull which Gammon retained in his Iowa herd. Bullion 4th, bred by Mossom Boyd and born on the Prince Albert farm in 1912, became the greatest Polled Hereford of his time. He was a double great-grandson of Variation, and was sold at the Mossom Boyd sale at Chicago in the fall of 1913 for \$2300. After establishing a remarkable

record in the herd of Renner Stock Farm, in Indiana, he was sold to W. A. Wilkey & Co., also of Indiana, for \$9,500, a record price for Polled Herefords up to that time.

During the quarter century that had elapsed between the beginning of serious settlement throughout the Northwest and the outbreak of World War I, there had been a tremendous advance. Strains of grain and breeds of beef cattle were much improved. At a surprisingly early stage in his history the western farmer had been taught the importance of such scientific development. Agricultural education he accepted more readily than did the easterner, and he was always ready to consider new methods. As a matter of fact, concurrently with his opposite number south of the international boundary, the western farmer had during this same period been working out an entirely new approach to the whole business of farming.

12 *The Agricultural Revolution*



THE cattle and wheat empires of the prairies brought something new into agricultural history. Subsistence farming here gave way to industrial enterprises the operations of which were to influence governments and affect international trade. True there had been large English landowners such as "Turnip" Townshend,¹ who had interested themselves in the development of agriculture on their estates, but only by a very considerable stretch of the imagination could they themselves have been called farmers. These westerners had their feet in the soil, but something in that soil seemed to make people think in grandiose terms, and both cattle ranching and wheat-farming early assumed large proportions.

In wheat the prairies had found the crop best suited to their needs. Originally a drought-tolerant grass, wheat could subsist, in general, on what moisture the prairies afforded, coming as it did at the period when it was most needed. The light snows of the dry western winters passed away quickly in the spring and let the air and top soil warm with little delay. Most of the rain-

¹Charles Townshend, second Viscount Townshend, brother-in-law of Sir Robert Walpole, spent the last eight years of his life (1674-1738) on his estate at Raynham where he was responsible for "introducing into England the cultivation of turnips on a large scale and for other improvements of the kind"

fall came early, soon after seeding, and there was generally enough later on to fill out the kernels but not enough to overdevelop the stalk, to encourage rust, or to lower the gluten content that was to make Manitoba hard wheat so famous in world markets. Soil and topography were also favourable, as A. W. Currie points out:

The soils, too, favour wheat growing. For the most part they contain ample nutritive elements, are easy to till, and are free from stones. They have a relatively high content of nitrogen, a food which high-grade hard wheat requires, but the chief cause of the superior quality of Western Canadian wheat is the relatively hot, dry weather during the period of seed development. The topography of the Region also assists in wheat growing because the level land allows machinery to be used extensively.

The importance of machinery in western development can hardly be overemphasized. As was the case with the Industrial Revolution and factory equipment, the western farm economy of Canada and the United States and the farm implement industry grew up side by side, each aided by and in turn stimulating the other. When the author's father came to Western Canada in the eighties, he had the experience of harvesting and threshing by means of cradle and flail; he lived to see his crops harvested and threshed in one operation by a self-propelled combine.

The Selkirk settlers broke their first crop land with spades and cultivated it with hoes. They were sceptical of the value of the first plough made in the settlement from imported iron in 1824, and it was not until after Confederation that John Deere's¹ steel plough with polished mouldboard surface replaced the early cast iron variety and the even more primitive type with iron point and wooden mouldboard. Even then it was often newcomers who led the way. When Alexander MacEwan pioneered in 1889, he used a ten-inch walking plough. It was a standard type, although some ploughs of the period cut only an eight-inch furrow. His next plough, however, was a twelve-inch gang and it was then that a sceptical neigh-

¹Deere was a New England blacksmith; he produced his plough in 1837.

hour went out of his way to propound the view that it was neither practical nor respectable "to farm in such a hurry."

To follow the new ploughs at Red River, "peg-tooth" harrows were adopted. These were of wood construction and made in the settlement. Some of them were bought by land-seekers who ox-carted westward in the seventies.

Seeding broadcast by hand was the primitive but rather logical method employed by the first farmers, east and west. It was the way the people in the old world had planted for two thousand years. Sometimes cattle or sheep were driven over the newly seeded fields to tramp the seed into the ground. But uniform results were impossible. A mechanical drill, which would place the seed below the surface of the soil, had been invented in England by Jethro Tull about 1730, but such horse-drawn or ox-drawn seeders did not appear in the new West until the C.P.R. reached Winnipeg. Then, for a time, there was a doubt about which type of seeder would be adopted, the drill or the mechanical broadcaster.

Mechanical broadcast seeders that simply scattered the seed over a large area gave promise of becoming popular on the big prairie farms, like the Bell Farm at Indian Head. In the first seeding season there, twelve one-horse broadcasters were started to scatter seed over 2,700 acres of new breaking. The Bell Farm undertook to test a new type called Gatling Gun Broadcaster, which took its name from the Gatling guns used in the Northwest Rebellion. Mounted on a horse-drawn or ox-drawn wagon, such a machine could throw the seed over sixty or eighty acres a day.

But the broadcasters enjoyed only brief popularity and were obliged to retire in favour of drills which would cover the seed. The first seed drill used at Red River was made in the settlement and patterned after the primitive English hoe type. It had no depth control and very little control of rate of seeding. Shoe drills were next and then disc drills.

The complete evolution in harvesting machinery in the years following the passing of the Homestead Act was even

more notable. A man with a sickle, a scythe, or a cradle, could harvest four or five acres in a season, if he were energetic, but the work was backbreaking. The threshing instrument at the same mechanical level, the flail, little more than a fork handle with a universal joint, was equally backbreaking. The reapers brought out by Rev. Patrick Bell of Scotland in 1826, and by Cyrus McCormick in Virginia in 1831, never reached Red River, but a few of those devised by Charles and William Marsh, Ontario-born brothers who went to Illinois, and later sold out to Charles Deering, found their way to Manitoba about 1861.

The McCormick reaper had been noisy and farmers were afraid to buy one because there was "too much to go wrong about it." A moving platform, which delivered the cut grain at the side of the swath, had been an improvement but the Marsh reaper had an elevator and a platform on which two men stood to bind the sheaves while cutting was in progress; these two could bind as rapidly as four men on the ground.

A man with a team and automatic binder could do as much in a day as six men had been able to do previously, but the first binders used wire for tying the sheaves, and this was not satisfactory. Wire had the advantage that it could be fastened by a twist while cord or twine required a knot. But it was expensive; it was objectionable in feed for livestock; and it made trouble at threshing. Of the factors which contributed most to the expansion of the western grain fields, none had more far-reaching influence than the invention of the mechanical knotter which permitted the use of twine. Early in the seventies, a man by the name of Behel whittled a model knotter from a piece of cherry wood and in 1877 an American farm labourer, J. F. Appleby, brought forward a mechanical knotter good enough to be adopted by William Deering. Appleby, it seems, had got the inspiration for his mechanical knotter when watching the antics of a dog trying to free itself from a rope which was about its neck, and a binder knotter of the present day in some ways resembles a dog's face.

The early binders gave a good deal of trouble, but notwithstanding, they were accepted at once and for nearly fifty years nobody considered an alternative. Unfortunately, there were right-hand binders and left-hand binders in that pioneer period and they had to operate in different directions around the field. The early McCormick had a right-hand cut and refused to work harmoniously with the left-handers which ultimately became standard. These pioneer binders were constantly getting out of order and the most highly respected man in any rural community was the one who had demonstrated skill in repairing them, especially the knotters.

The first twine binder was used in Manitoba in 1881 and a year later William Cust, a well-known pioneer who settled north of Edmonton at St. Albert, brought a binder of the newest design to his district. The Bell Farm at Indian Head had 45 binders working in a single field in 1884, but this was too many and broken machines were constantly in the way of those able to operate. On the big Detchon Farm at Davidson, from which up to 200,000 bushels of wheat were marketed in a year, 15 or 18 binders would go to the field together, but Ernest Montgomery spent his full time rotating among the crippled machines. He drove an aged mare called Belle and a democrat loaded down with bolts, band-iron, wire, and tools. When a binder operator encountered trouble, he was supposed to pull out and raise a red flag on his whipstock. That was the signal for Montgomery to drive post-haste to the scene. The old mare became so accustomed to the work that when a flag was raised, although it might be a quarter of a mile away, she would promptly strike out at a bold trot. About half the time she did not even wait for the one-man brain trust in which reposed the vital knowledge needed for repairs.

About the worst thing that could happen in those pre-atomic bomb years was an attack by Indians with scalping knives or a general stampede in a field full of bronco-drawn binders. The Detchon Farm experienced one serious runaway.

A whirlwind startled a four-horse team and nine other outfits joined in the dash. Horses were mangled, machines were wrecked, but strangely there were no human casualties.

Mechanical stookers were tried but they were not very successful and never became popular. One brought to Brandon about 1912 gave satisfaction long enough for an impressive demonstration before a visiting Governor-General, but never worked again.

Andrew Meikle, a Scottish mechanic, invented a threshing machine in 1786, but the Selkirk settlers loosened the grain from the straw by means of a flail and depended upon the breezes to remove the chaff, just as in Old Testament times. There is no record of the first mechanical thresher in the West, except that one was in use at Red River about 1864. It was driven by means of a "horse-power," a mechanical unit by means of which the power developed by horses or oxen, driven in a small circle, is transmitted by shafts and gears to a pulley and belt. The first thresher in the Territories was taken to Battleford by the Lieutenant-Governor in 1878 and one was hauled to the settlement at Prince Albert about the same time. It is not known how much work was done by those pioneer machines but we do know that they were centres of curiosity and admiration. And, as might be expected, there were those who could see no future for them.

Threshers differed from other farm equipment in that farmers did not attempt to own their own. Three rather primitive machines did the threshing in the Moose Jaw district in 1885, about three years after the settlement began. The one operated by Battell Brothers was driven by a portable steam engine, while the other two were driven by horse-powers. One of the latter, owned by Mrs. John Latham and operated by Archie Dalrymple, for whom the village of Archydal was named, threshed for fifty-four farmers in that year and did a total of 25,406 bushels. Obviously no farmer had a big acreage. They threshed some wheat on every farm, oats on forty-five of the farms, and barley on eighteen of them. It was all stack-

threshing. Three men, with two teams to haul water and straw for the engine, accompanied the outfit and the custom charge was three cents a bushel.

Steam engines as a source of power for threshing were gaining in popularity over the horse-driven power plants, but not rapidly. There was still too much mystery about a steam engine, and nobody liked the thought of exploding boilers. Even an organization like the Canadian Agricultural, Coal and Colonization Company, with lots of capital, bought horse-powered units instead of steam engines in 1899.

In 1891 Moose Jaw farmers saw a threshing tractor that would burn straw and move by its own power. Twelve settlers clubbed together to form the Marlborough Syndicate that year and brought in the first threshing outfit which was equipped with traction engine. The separator was a 42-inch Sawyer Massey and although then the most up-to-date, it was without automatic feeder, blower, or weigher. The Syndicate introduced the idea of the sleeping caboose for the threshing crew. That twelve-passenger bedroom on wheels became an essential part of the itinerant thresherman's equipment. For foul odours, noisy sleeping, and dirty bedclothes, it has never been surpassed or even equalled. Contributing generously to the aroma of those memorable sleeping institutions was the bag of tallow which was always to be found beneath the engineer's bunk. Each farmer for whom threshing was done was asked to save a supply of tallow for lubrication, as the steam cylinder was fussy and would not accept mineral oil.

The self-feeder and wind stacker did for threshing what the automatic knotter did for harvesting, and these labour-saving additions to the separator reached the western grain fields in the late nineties. A mammoth steam tractor and the first threshing separator equipped with blower and self-feeder in the Brandon district were brought there by Alex MacEwan in 1898. The tractor was of the Minneapolis, return-flue type, with the funnel on the rear end, and the separator was described as a 42-60. The big outfit operated for sixty days and threshed for

twenty farmers in its first season, but it left behind it a string of broken bridges, including the 18th Street bridge across the Assiniboine at Brandon. Bridges had not been constructed for such a monster, and repairing them proved costly. Thereafter, when the river had to be crossed, the outfit was loaded on a flatcar at Chater or Brandon and moved the safer way.

When stook threshing was becoming fashionable, such an outfit had to carry a big crew of men and teams. In this particular instance there were eight stook-wagons, and two men went with each. Thus four men pitched into the mighty mouth of the separator at one time. On one occasion they threshed 1,000 bushels of wheat in three hours and if the truth were known, a lot more went into the stack with the straw. In addition to the sixteen men with stook wagons, there were from five to eight teamsters who hauled away the threshed grain. Then there were the engineer, the fireman, the separator man, the straw man, the tank man, and finally that hardy soul who could survive a threshing season with little food and no sleep, the boss.

That separator, which was the climax of a hundred years of improvement upon the invention of Andrew Meikle, did not operate without a good deal of trouble. There was a repair job nearly every night and often it lasted until sun-up. The primitive self-feeder, which was to remove much of the hardship from threshing, caused many delays and in the second year of operation it was removed and feeding was done by hand. Thereafter, four men pitched sheaves from the loads to the tables, two men cut bands, and two men fed the broken sheaves into the jaws of the cylinder. Altogether eight men worked simultaneously at the feeder end of the separator.

Better feeders and better separators soon made their appearance but that first tractor gave long service in the Brandon country. Ultimately it was dismantled and its huge drive wheels were converted to paddle-wheels for a steamboat which operated on the Assiniboine River.

It is strange that nobody has written a book or a three-act play about threshing in the early years of Western Canada. In

that season all social intercourse ceased. Cows went dry because nobody had time to milk them. School attendances dropped to the point where the teacher was almost alone. Threshing season brought out the best and the worst in people. Some loved it and some went insane.

Getting and holding a crew was not always an easy matter, especially late in the season when cold weather and snow added to the hardships. Frequently the teamsters were neighbours or homesteaders who left their land to make some extra money. Often they were the hard-hitting, hard-drinking men who worked in the lumber camps in the winter and came to the farming districts at harvest time. They received a dollar and a half a day and all they could eat.

A little later, harvester excursions were instituted and many young men from eastern Canada got their first glimpse of the prairies from the window of an excursion train. Some of the easterners remained in the West and took up farming for themselves. Others found the sheaves too heavy, or the meals too far apart, or the alkali water too bitter, and went home with the least possible delay. They were not all good workers but they brought appetites which refuted all recognized physiological limits.

When lumberjacks and excursionists from the East were working in the same crew, the stage was set for a feud, especially if the easterners slept late in the mornings or, by building small loads, did less than their share of work. When one Ontario man stole a bottle of whisky from the lumberjacks, the woodsmen retaliated by placing a forkful of barley beads in the bed of each of the easterners. It was too much. The easterners collected their wages, went to town on Saturday night, and did not return.

The acknowledged hero of the harvest season was the steam engineer. He had special qualifications, he held a certificate, and he commanded the biggest wages and the greatest respect. If he had a good outfit, he wasn't very busy. As he stood with folded arms on the great drive wheel of the tractor, and sur-

veyed operations, he knew that he was the envy of everybody. When he placed his hand upon the throttle and the mighty wheels responded, young hero-worshippers resolved on the spot to become steam engineers. It took a good man to resist the virus of conceit.

For a normally susceptible engineer, probably the biggest thrill of all came when he pulled the cord of the steam whistle and human ears tingled for miles around. The single long blast that meant quitting time was always welcome. There was one mule team that positively refused to move a load or tighten the traces after that quitting signal. Two long blasts brought a special message to the tank man, who was pumping at some distant slough or creek, that water was low. Three blasts reminded teamsters on the grain wagons to hasten along so there would be no delay for want of a place to deposit the grain, and a series of short toots warned the workers on the stook wagons to speed up or the machine would be left "to idle."

The least pleasant features of the engineer's job were the long night moves and the necessity of cleaning flues or making repairs after quitting time or on Sundays.

No matter how fatigued he might be or how big the blisters, nobody received sympathy. Probably the one who most deserved it was the lowly fireman. He was the first to arise in the morning and was "firing up" before daylight. When the steam gauge registered the desired pressure, he might take time out for breakfast, but except for brief spells, between 4 a.m. and 7 p.m., he was almost continuously pushing straw into the fire-box.

Another distinctive character was the old-time separator man. His dusty and dirty job was not glamorous. But he commanded the second highest wage and upon his skill depended the success of the season. He was expected to have untold knowledge about bearings and concaves and pulleys, and at lacing belts he was a master. Such knowledge came not from books but from years of experience. For fully half of his time he

was squirting oil into holes which nobody but himself would have any hope of finding.

A poor machine or a prolonged spell of damp weather could make life unpleasant for the separator man. Threshing after freeze-up or when the snow was on the ground, though often necessary in the early years, was equally trying. Some of the experts failed to stand the strain and in bad threshing seasons a special ward in the mental hospital was reserved for separator men. What more than one visitor to that ward saw was a broken separator man waving his arms and calling, "Shut her down! Shut her down!"

All in all, those big threshing crews represented a perfectly co-ordinated effort and each of the fifteen or twenty-five members had his part to play on the team. More than that, it was a strictly co-operative undertaking in the community. The wagons, racks, and horse teams were assembled from farms about, chiefly from those which would be served by the outfit. And some of the dishes and pans used in the kitchen were requisitioned from willing neighbours. Thus the job of keeping the accounts was often difficult and complicated. If a man had a big crop and depended upon much outside assistance, all one side of the barn door might be needed to carry the figures and balance the account. It was an argument in support of bigger doors on barns.

One might marvel at the fortitude and stamina of the farm women who fed those big gangs of ravenous threshers. When threshers were coming, the kitchen table was extended by strange and ingenious means until it would seat fifteen to twenty-five men as the occasion demanded. There one learned to eat with elbows "in his pockets," and there one learned, by the necessity which comes from competition, to eat in a hurry.

It wasn't much wonder that the thought of a breakdown or delay occasioned by wet weather terrified the farm women. Meals were provided as usual whether the weather was fit for threshing or not and it was common for the woman of the home

to serve a total of 400 or 500 man-meals before the fields were finally cleared of stooks. That represented a lot of potato peeling, a lot of planning, and a lot of dish-washing. There wasn't much romance about that side of early threshing.

When the pioneer outfit described moved to the farm of a bachelor doing his own cooking, the woman's importance to the threshing organization became very clear. Even the rough and ready teamsters were critical. One of them had the temerity to wash out the endless or "perpetual" hand towel that had hung on the roller since the last threshing. Another undertook to empty the teapot and discovered, among the accumulation of time, one mouse. The engineer poured corn syrup on the table-top to serve as a fly trap in the hope of relieving the atmosphere of some of its wild life. Eventually the gang worked long into the night, finishing by lantern light to avoid the necessity of eating another breakfast at Bachelor Hall. It was a costly affair for the farmer, considering the reckless manner in which the sheaves were heaved into the feeder that dark night and the inevitable loss of grain in the straw, but was a good lesson because, before the next threshing, he had a wife.

Large-scale production and specialization were features of the agricultural as they were of the industrial revolution. In both cases a motivating factor was the economical use of the expensive machinery necessitated by modern methods. Involved with such a development, however, was a complete change in the thinking of the operators.

The Red River colonists had been mixed farmers, producing for home consumption. They had grown what their kitchen tables demanded: cereals, vegetables, milk, butter, cheese, meat, and eggs. They had grown no fruit because the fallacy that it was "too far north" died slowly, but the lack of domestic fruits had not been serious because there were native varieties for the picking.

Frontier agriculture had conformed to this diversified pattern until western wheat became important in commerce and the much criticized system of one-crop farming emerged. Legis-

lation for the encouragement of mixed farming and the protection of the stockman was not lacking, either in Manitoba or in the Territories. Ordinances with a familiar ring were written by the Council of the Northwest Territories as early as 1881. An Ordinance Respecting Trespassing and Stray Animals provided for pound districts and poundkeepers and resembled a modern Stray Animals Act. On the same date there were passed an Ordinance Respecting Bulls, which made it illegal for bulls over one year of age to run at large in named areas, and an Ordinance for the Protection of Sheep which made it permissible to kill any dog found pursuing, worrying, or destroying sheep on any except the fenced land of the dog owner. The latter would have done credit to a modern Sheep Protection Act designed for a mixed farming province.

In the twenty years which followed, pigs, sheep, and poultry had increased rapidly and cattle numbers pyramided rabbit-wise. The last development, however, was in beef cattle more than dairy cattle and hence a prelude to the one-crop ranching which paralleled wheat-farming and which led to a situation in which a respectable cowhand would shudder at the thought of drinking milk unless it came from a can. To the rancher, cows were for beef, horses were for driving cattle, and any other form of livestock was scarcely tolerated. He particularly disliked sheep, which destroyed the pasture for cattle, were foolishly tame, and were sometimes more profitable than the nobler beasts. Sheep and sheepmen were hazed relentlessly by cattlemen, and when the bleating band came too close, it sometimes happened that a herd of wild cattle was stampeded through the middle of its helpless thousands. The pedestrian shepherd was about as helpless as his sheep unless he carried a gun, in which case he sometimes took to shooting imaginary clay pigeons, in the general direction of the belligerent cowboys.

So strong was the feeling, that in 1884 regulations were passed to prevent sheep from grazing on crown lands in certain areas. Practically all crown lands south of the Bow River in what is now Alberta were included, with the result that the

range bands were forced eastward into Assiniboia. Consequently the sheep range story was written in southern Saskatchewan, and Alberta was left to the uproarious possession of the one-crop cattle-ranchers.

Horses were in strong demand by increasing numbers of settlers until 1921, which represented a peak year for that class of stock. Thereafter, tractors increased and horses decreased. The rate at which farms were mechanized seems a little inconsistent with the best agricultural traditions. Farmers who bred and raised their power and grew their fuel should have been in the more secure position, especially in the years of depression. Furthermore, the declining horse population accounted for a share of the grain surpluses which embarrassed Canadian agriculture in the thirties. But the tide of mechanization could not be stopped and in its favour were reduction of toil and lower costs of production.

In the West dairying had never reached the degree of importance it had in the eastern provinces, though its advocates kept hoping. Dr. Rutherford, reporting in 1908, expressed his disappointment thus:

Three times we got our farmers started into mixed farming; we had cheese factories and we got them interested in cattle and hogs. In fact, we got things going nicely in the way of mixed farming and rotations. Then a good crop would come along and everybody would go crazy; they would shut the cheese factories and let the cattle freeze.

It was hardly as bad as that, but in the campaign to achieve a diversified agriculture, the well-meaning advocates were not always right in prescribing for conditions radically different from those of Ontario. Because a silo was a good investment for an Ontario farm didn't mean that it would be good for a Saskatchewan farm, and many of the silos that were built in the West were abandoned when it was discovered that, in dry country, farms could produce a pound of dry matter in hay or oat sheaves cheaper than a pound of dry matter in silage.

In some districts there was no water for livestock. And it was difficult to convince wheat farmers, with their eyes on the

big profit a good crop could bring, that they should undertake fussy activities such as dairying, poultry raising, or growing vegetables and fruits, which made so much additional work with no more than moderate additional profit. No phase of production offered more advantage in simplicity and ease than wheat, and in good years none was more profitable. Even those who came from the critical East and who had been reared amid milk cows and turnips, and little fields, were quick to adopt the "western way."

When wheat farming was adopted, eastern and overseas critics said the soil was being mined rather than farmed. Soil would lose its fibre under a one-crop economy, they declared. Erosion would become more acute; weeds would increase; losses from insects and plant diseases would be greater and fertility of soil would deteriorate. The hope was in rotations with more use of grass and legumes and livestock. Mixed farming would be balanced farming where the soil fed the livestock and the livestock fed the soil. In theory, it stood for the best degree of harmony between soil, grain crops, forages, and livestock.

Short courses were dedicated to diversification; bulletins were written on the subject; and Anniversary Sunday sermons were preached about it. Everybody agreed that it was a fine idea. Manitoba eventually showed some swing to it, but out on the true prairie land, farming people went merrily on their way. Soil was new and high in fertility and wheat could withstand drought better than other cereals. With a market for it, wheat was logical, especially after the high quality of the grain grown on western soil was recognized. "Number One Hard" became the "hallmark" and wheat appeared as the most certain route to prosperity.

The tempo of western development was rapid, and through most of the West the era of sod shanties passed quickly. Frederick Niven (in *Canada West*) tells of a newcomer in Medicine Hat boasting about how Moose Jaw, his home town, was forging ahead.

At last one of the listeners broke out with:

"Why, man, this is all exaggeration. I've just come from there myself."

"When did you come?" promptly enquired the talker from Moose Jaw.

"Just four days ago."

"Ah, there you are!" exclaimed the man from Moose Jaw. "You should see it now."

With more sense of reality, John Beames in his powerful novel, *Army Without Banners*, traces the changes in one Saskatchewan community in the twenty years between 1898 and 1918 from the first sod-roofed poplar shanty, twelve by fourteen feet, built by Billy Clovelly on his unfenced homestead, to the thriving farm community of Cloam with its school, post-office, and elevators, the farms with shelter belts of poplar and caragana, substantial houses, barns, and fences.

These people were homemakers on a grand scale. On the naked prairie they planted shelter belts and gardens, cities with fine business buildings, legislative halls, and universities. They established local culture, informal, reckless, energetic, and independent, like its founders. In the farming communities this centred in church and school, and young people continued to spend their winters at school until they married, coming in after the harvest and leaving in the spring for the seeding. When markets and rainfall were favourable, there was a car in every converted driveshed; a fur coat in every closet. A farmer might buy ten thousand dollars' worth of new machinery at one time; you couldn't farm several square miles of prairie by hand. Many of them may have extended themselves too much, as a manufacturer may. They gambled that they would escape the frost and hail and rust and smut and be able to market a good harvest at a good price. If they succeeded there was a good profit in it for them, and they would buy more land or go south for the winter. If they lost they could grit their teeth and try again.

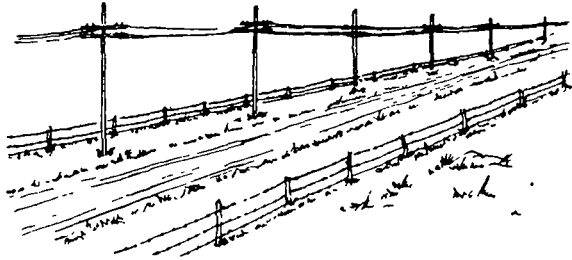
Wheat farming was a seasonal occupation and farmers in some districts were resident during the seedtime and harvest

but far away in Vancouver or Florida enjoying a summer climate throughout the winter. Some districts of big wheat farms were almost depopulated of rural people after freeze-up in the autumn. On a certain date, Pullman cars were spotted for the convenience of the transient farmers and a general exodus occurred. This was not good for the communities and it made diversification impossible; there was no place for livestock where operators were resident for part of the year only. The agricultural revolution had been accomplished, but like the earlier industrial revolution it had gone to men's heads. They still had much to learn before their way of life on the prairies was to become settled and secure.

But for the first quarter of the twentieth century they had no qualms. Manitoba and the two young provinces formed in 1905, Alberta and Saskatchewan, were flourishing. Before World War I Canada stood third in world trade in wheat; by its end she was second only to the United States; and by 1923 she had moved up to first place, which she held throughout the twenties. War and revolution had put Russia out of the picture, and increasing industrialization drew Americans from the farm while population increases were demanding that a larger proportion of the American wheat crop be retained for the home market. Argentina was increasing production, but during this period Canada's share in the world wheat trade was almost two-fifths of the whole and almost as great as the total export of the United States and the Argentine.

Under the spur of war and postwar demand the Canadian wheat industry expanded amazingly. Many marginal lands were brought under cultivation. Many farmers mined their land instead of conserving it. There was a good deal of waste and extravagance. And thus in the very heyday of its triumph were being sown the seeds of future problems.

13 *Changing Ways*



THE period between the close of World War I and the commencement of the weary depression decade of the thirties marks in a sense the culmination of the wheat economy in the Canadian West. The agricultural revolution had been completed. Canada had won an outstanding place in world commerce, chiefly on the basis of its grain trade. In spite of a short post-war depression and the ups and downs inevitable in farming, times were good and people were optimistic. Progress had been made in agricultural education and scientific experiment. The mechanization of farming was nearly completed. The long development of railways was crowned by the opening of the Hudson Bay route. At the same time the seeds of disintegration were present. Whole communities in south-western Saskatchewan were quietly going bankrupt. Reckless gambling on one crop, overextension, extravagant purchases of lands and machinery, which could be supported when times were buoyant, were to exact a heavy toll after the bottom dropped out of the stock market.

There was no extravagance in the cattle industry's increasing awareness of the value of good sires. At the same time the growing interest in high class Herefords which reached a spec-

tacular climax about the end of the first world war created such a mushrooming demand for superior bulls that unprecedented prices were paid and show-ring competition was keen. Hereford competition at the Calgary Summer Fair in 1917 was the most exciting ever held in Canada. It was as good as a first of July horse race at Deloraine, Manitoba. The herds entered were those of Frank Collicutt of Crossfield, George Fuller of Saskatchewan, the Curtis Cattle Co., whose herd had been moved from Kentucky to Alberta, J. A. Chapman of Manitoba, W. M. Williams of Alberta, and L. O. Clifford of Ontario. It was expected that the principal competition would be between Fuller's \$17,000 three-year-old, Martin Fairfax, and Collicutt's \$11,900 two-year-old, Gay Lad 40th.

But the showring is uncertain and the championship went to an unexpected contender, Beau Perfection 48th, a magnificent two-year-old, who, along with other representatives in the Curtis herd, had arrived unheralded upon the Alberta scene. The bull had won the supreme award on merit, in the strongest competition ever seen in a Hereford ring in Canada. And the huge crowd that had gathered to see Professor Carlyle of Oklahoma choose his champion approved. One year later, at the Calgary Summer Show, the \$20,000 Gay Lad 16th which Collicutt had bought from the Glengarry Cattle Co., of Claresholm, topped the aged class and was champion, while second went to Beau Perfection 48th, and third to Gay Lad 40th.

An interesting feature of ranchland history in the third decade of this century was the withdrawal of Matador cattle from Canadian soil. In its heyday this cattle company operated in the United States, Canada, and South America. Just how a ranching organization with roots in Dundee, Scotland, acquired a Spanish name is not clear, perhaps from its foundation stock of Longhorn cattle of Spanish origin. In any event, here was a ranch outfit as colourful as the gayest picador and as daring as the bravest matador.

It was in December 1882 that the Matador Land and Cattle Company was organized to run cattle in Texas. It was capital-

ized at £400,000, and at the end of the first year of operations owned 40,000 head of cattle. When Murdo MacKenzie became manager in 1891, the Matador herd was up to 65,000 and the company was looking for more pasture. Trail herds sent north to Dakota and Montana did well and MacKenzie, whose enterprise as well as his name betrayed his nationality, argued that the good grass and good range did not stop at the international boundary. He urged that grazing lands on the Canadian side be investigated.

Acting for his company, MacKenzie made formal application to the Canadian Government for a grazing lease along the South Saskatchewan River, north of Swift Current. That was in August 17, 1903. The 21-year lease which was granted dated from November 1, 1904, and in the following June, cattle, wagons, tents, horses, and riders arrived.

The lease comprised six townships. Some of it had good soil of the Sceptre clay type and other parts had light soil, unsuited to cultivation. When stocked, the ranch carried about 6,000 cattle each summer and 4,000 in winter after the fat four-year-olds had gone to market. John MacBain's returns dated July 25, 1914, showed 6,486 cattle and 100 horses.

Company policy on the Canadian lease was unusual. No breeding cattle were carried. The range was kept exclusively for growing out and finishing the young cattle from the southern ranges. Cattle were shipped in as two-year-olds, unloaded at Waldeck or Wiseton, and driven to the range, where they remained until ready for market as fat four-year-olds. For a time it was possible to bring the young cattle to Canada in bond and clear them without duty when sent to the Chicago market a couple of years later.

Company policies were progressive. The cattle with the Flying U brand were of Hereford breeding and high in quality. While some ranchers continued to operate without putting up winter feed, the Matador had its stacks of prairie wool in all years, and losses were generally small. But in the disastrous winter of 1906-1907, the mighty Matador did not escape. The

stacks of prairie wool were not big enough for such a persistent winter and 40 per cent. of the cattle on the Canadian ranch were lost.

As time went on, new difficulties were encountered. The company had increasing trouble about income tax on account of operations on two sides of the boundary; new obstacles were placed against bringing cattle to Canada in bond; and a change in Dominion lease policy required that at least one-third of the herd be breeding cattle. Instead of renewing its lease in 1921, the company withdrew from the Canadian scene.

The concluding act consisted of swimming the 6000 white-faces across the Saskatchewan River, at a time when the water was comparatively high. The crossing was made close to ranch headquarters, which nestled in the river-breaks, about seven miles downstream from Saskatchewan Landing. The crossing took more than a week to complete and fortunately a photographer was present.

The Matador and its Canadian managers, David Somerville, J. R. "Legs" Lair, and finally John MacBain, exerted a powerful influence in the west country. The ranch territory had demonstrated superior value for supporting cattle, and when the lease was permitted to lapse the land was reserved for a community pasture, to be administered by the Saskatchewan Department of Agriculture. As such it served well and became a working model for the community pastures organized fifteen years later under the Prairie Farm Rehabilitation Act. Thus the departure of the Matador from the Canadian scene, though coming early in the transitional twenties, at once served as a rearguard action for the vanishing West of unfenced range and free enterprise and paved the way for a reconnaissance in strength of the planned economy the future was to bring forth.

While the cattle scene was changing, wheat production was increasing in the irregular fashion to be expected of a farm commodity, with ups and downs but a net advance. Only twice between 1920 and 1929 was the production below 300,000,000 bushels, whereas only once before, in the record-breaking year

of 1915, had it exceeded that figure. In four years of the decade production exceeded 400,000,000, and once in 1928, it reached the stupendous total of 566,726,000. Farmers, as we shall see in a subsequent chapter, were learning to market these huge crops in a manner which would more adequately protect their interests. And the tractor, unfortunately in some ways, was largely replacing the horse for farm work.

Prairie farmers exercised a good deal of ingenuity, always a characteristic of the frontier, even a mechanized frontier, in the use of their new machinery. George Lane, of Bar U Ranch fame, brought a very powerful steam tractor with upright boilers to his land near Champion, Alberta, and fitted it to drive two big threshing separators at the same time. The separators stood side by side, but were driven by separate drive belts. Ten teams hauled sheaves and two spike pitchers and a teamster fed into each separator.

Not far away, at Raymond, Ray Knight got the idea of ploughing with stationary engines. An order was placed in England for two steam tractors, an eight-furrow plough, and a supply of cable. One engine was placed at each end of the field and the ploughs were set to cut twelve inches in the ground being prepared for sugar beets. The ploughs were drawn back and forth from one engine to the other. It worked, but not well enough to carry the practice beyond the experimental stage.

But the glory of the straw-burning steam tractor and big threshing unit departed. The steam engine was an efficient threshing unit but in field work it could not stand the increasing competition from gasoline engines. At one period oxen, horses, steam tractors, and gasoline tractors, were working side by side on some of the big western farms and nobody was very sure which would prove best.

When the big Detchon Farm was operating at Davidson, it could be demonstrated that the horses, mostly bronchos, furnished the most economical field power. Two big Reaves steamers, burning coal on five-mile-long furrows, were second in economy, and the Pioneer gasoline tractors were most expen-

sive. It was on the Detchon Farm about that time that men sent to break some new land misjudged the farm boundaries, extended the furrows a mile too far, and ploughed an entire section belonging to a neighbour before discovering their mistake. The story is that the neighbour watched in silence.

The Noble Foundation Farm at Nobleford, Alberta, was among the first of the big ones to adopt power farming. Following a record crop in 1916 when Charles S. Noble reported a yield of 125 bushels of oats to the acre and 54,230 bushels of wheat from one thousand acres, the farm holdings were extended by the purchase of the Cameron Ranch. In the following year the new land was brought under cultivation by the use of eight large steam tractors operating twenty-four hours a day.

After World War I, some of the mechanical know-how which had been developed in war industry was diverted to production of agricultural equipment, and the gasoline tractor was greatly improved in efficiency. It became difficult to get help to man the big outfits and the gasoline engine displaced the steamer as well as an increasing number of farm horses. Those slow-moving, lordly giants of the steamer period became derelicts in fence corners and abandoned farmyards, proud memories of pioneer years.

The gasoline tractor that made its bid for popularity after 1916 was of medium size. People lost interest in the big ones. By 1921, Canada had 47,500 farm tractors and in 1950, 365,000, or about 55 tractors per 100 Canadian farms. Gradually, farming people ceased to question the efficiency of the modern tractor or to debate its merits. The equipment that came with it, including one-way discs and harvester-thresher combines, allowed wheat and other grains to be grown with a fraction of the time and toil expended formerly. By 1929 mechanization had gone so far that harvesters' excursions from the East were discontinued. The mechanical advances in grain production were great, but they added to the difficulty of promoting diversification. The business of keeping, feeding, and cleaning livestock did not feel much relief, and there was the danger that

mechanization of the grain fields would result in an increased drain upon soils. Tractors could spread manure but they could not make it.

During World War I and after, the growth of mechanization was a factor in opening new lands to settlement. Better than average rainfall and high prices combined to encourage this expansionist movement, and tractors and combines enabled farmers to harvest a larger acreage between the maturity of the grain and its spoilage by early frost and snow. In a low-yield district a farmer on a comparatively small acreage could not have more than a small profit, but if the acreage were large enough a tiny profit per bushel could assume important proportions. Many parts of Palliser's triangle which should never have been broken from grazing were settled at this time. The development of the Peace River country also went forward rapidly, the population more than doubling between 1927 and 1931.

The search for new and better varieties of wheat continued, for earlier wheats which would be still more secure against frost, and for wheats which would resist various pests and parasites.

Stem rust, for instance, attacking wheat and other cereals, took a heavy toll in western fields. It was not new; it had been recognized in Greece 2,000 years earlier. But no one seemed able to combat it. In Western Canada crop disasters caused by the rust fungus occurred in 1904, 1911, 1916, and 1927. In 1916 crop damage in western fields went to \$100,000,000. Divided among a hundred thousand farmers, that is still a big loss.

The plant breeders were alerted. Dr. W. P. Thompson of Saskatchewan observed that certain durum and emmer wheats were highly resistant to rust, while none of the common bread wheats possessed the power to stand up against it. When a conference was held in Winnipeg in 1916, Dr. Thompson startled his listeners by proposing a breeding programme to obtain a rust-resistant bread wheat. The new wheat would have to be good. Besides being rust resistant, it must possess good bread-

making qualities, be a good yielder, and be at least as early as Marquis.

Pioneer work in the United States was undertaken by E. S. McFadden of South Dakota and H. K. Hayes of Minnesota. Both McFadden's H-44 and Hayes's Double Cross traced to Marquis and both entered into the formation of some Canadian varieties. On the Canadian side, the National Research Council, with the co-operation of the Department of Agriculture and the midwestern universities, set up the Associate Committee on Cereal Rust in 1924. Its purpose was clear, a death blow to rust. Plans were drawn up, and the Dominion Rust Research Laboratory, erected on the campus of the University of Manitoba, was opened for business in the following year. The Associate Committee on Grain Research came into existence in 1926, charged with the important responsibility of testing the milling and baking qualities of new varieties. Canada couldn't afford to make a mistake about quality.

Even before World War I the Canadian grain trade had ceased to be regarded as purely private business. As McGibbon points out:

Successive government investigations and ensuing statutes had placed it under comprehensive regulation. In a general way public policy had put the handling of grain into the same class of controlled enterprise as chartered banking or rail transportation. In one respect there was complete freedom. There was no attempt to interfere with the prices at which grain could be bought or sold. . . . Hence, the typical grain trader in Canada, both elevator man and grain merchant, though rigidly controlled in the former capacity, was free to pursue his own devices with regard to purchase and sales.

Government control of the handling system had been established on a fairly comprehensive basis prior to World War I and legislation had been consolidated in the Grain Act of 1912, but there were complaints in 1917 and 1918 that the Great Lakes terminal elevators were working towards year-end surpluses which operated to the disadvantage of producers. The Act was amended to provide for the forfeiture of all such surpluses over

a certain percentage of the year's receipts. This was the beginning of a long fight in the courts on the federal government's competence to regulate the trade. Those who considered their business interests injured by such regulation claimed that it was contrary to the British North America Act, which left "property and civil rights" to the provinces. Defenders of the government position insisted that it was merely a part, and a very vital part, of the Dominion's duties in connection with the regulation of "trade and commerce."

Before a decision had been handed down by the final court of appeal, at that time the British Privy Council, the Canada Grain Act of 1925 was passed following the conduct of the Royal Grain Inquiry of 1923-1924. This Act met the criticism that the federal government was interfering in rights of private property by declaring all elevators to be "works for the general advantage of Canada," but by this time other sections were under fire from private interests, notably the provisions for bonding and licensing grain buyers. Small buyers who operated at country points, without elevators of their own, had little capital, and often secured grain on the basis of extravagant promises, afterwards defaulting payment. The Grain Act of 1930 got around this new criticism by patenting the grade names used in designating wheat standards and refusing permission for their use to any but licensed operators. It also forbade the railways to accept consignments of grain to or from unlicensed men. Thus by the end of the twenties means had been found to regulate on a fairly secure basis the handling of this crop so vital to the life of the entire Canadian people.

Government supervision, however, as pointed out, did not as yet extend to prices. Floors and ceilings, subsidies and bonuses, were still far in the future. The farmers were by no means always satisfied with the prices they received and they formed a variety of organizations to improve marketing conditions, but until the end of this decade no one seriously questioned Canada's ability to dispose of all the wheat she could produce. The big increases in the Canadian crop during this and the previous decade had been absorbed by war demand

and the postwar market in countries where agriculture was slow to be rehabilitated. In Canada's record-breaking year, 1928, she exported in wheat and flour about 42 per cent. of the world's total international shipments. But prices were dropping below the cost of production and a reorganized Russia was ready to become a serious competitor in world markets. During the decade to follow no organization was to prove adequate.

The transportation picture in the grain trade changed somewhat during the twenties to accommodate the greatly increased crops of the period. The first feature was the rise of the Port of Vancouver. The first big terminal elevator was built in Vancouver by the Dominion Government in 1916, two years after the opening of the Panama Canal made the West Coast route possible for shipments to Europe as well as to the Orient. At first, movement by this route was sluggish but by the end of the decade some 95,000,000 bushels of wheat went out of Vancouver during a crop year, of which over 30,000,000 went via the Panama Canal to the United Kingdom.

But the wheat crops of the twenties were bursting the transportation system at the seams and western pressure continued until the completion of the Hudson Bay Railway in 1929. From the days when the Hudson's Bay Company had brought the supplies for its fur-trading empire by this short route, at a cost much less than that incurred by the North West Company in packing its goods overland, the value of a harbour on the Bay had been discussed and was fairly generally recognized. Henry Hind presented a brief for it before a House of Commons Committee in 1878. The Manitoba and North-West Farmers' Union meeting at Winnipeg in 1883 passed a resolution asking for a Hudson's Bay Railway "with the least possible delay." Several routes were suggested. Work was finally started from Hudson's Bay Junction in 1910, only to be interrupted by World War I.

Whether the railway was practical was still in doubt. The Bay was ice-free for a comparatively short period; indeed the critics doubted if it would be open long enough in the autumn to ship an appreciable share of wheat before freeze-up. But the West was insistent, and its political voice was strong during this

period. By 1931, in addition to the railway, the port of Churchill at the end of the line on Hudson Bay boasted a large terminal elevator and radio stations and other navigational aids. While this railway has not come up to expectations as a grain route, it has opened new sections of Manitoba north of The Pas.

A word must be said of the new Welland Canal, which was also built during the postwar period. Capable of holding the largest lake freighters, and with only seven locks to overcome a drop of 326 feet, it is one of the greatest engineering feats of the world. Certainly it facilitated shipment of Canadian wheat through Canada, and effected economies which did not need to be large on individual grain shipments to save a good deal of money on the amount handled during a season. The building of this canal helped handlers by the Atlantic route to retain the lion's share of the export trade.

While the expansion of the prairie wheat economy thus continued through the twenties, new rivals, puny at first, began to make themselves felt. The oil and mining developments of the twenties were not without their relation to a possible change from one-crop thinking, although it took a depression and a second world war to give them real importance in men's minds.

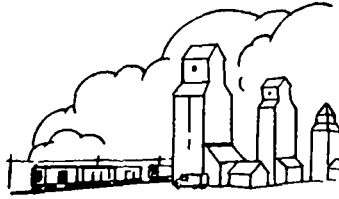
The rich ore deposits at Flin Flon on the Manitoba-Saskatchewan boundary and on the southwestern fringe of the Canadian Shield had been discovered in 1914. During the next two years, and in 1917 and again in 1920, many thousands of dollars were spent in attempts at development. But the ores were very complex and a satisfactory method of separating them was not devised until 1923 when the flotation process was perfected. A test plant was established at Flin Flon and in 1928 a railway was built to replace the tractors and sleds on which freighting had been done up to that time. Like most mining developments, this suffered from the depression of the thirties, but it was of permanent value and was one of the early signs that the prairies might one day pass from the primitive colonial stature of a one-crop region to a more balanced and therefore relatively more stable economy.

Oil development followed a similar pattern. The original drilling in Turner Valley in the foothills country took place in 1913–1914, but the deeper productive zones of the Valley were not reached until 1924. This field was limited and the interest in oil stocks never equalled the interest in mining until the sensational discoveries following World War II. At the same time, like mining expansion, it turned the minds of prairie people, occasionally at least, to thoughts of a possible industrial development.

The prosperity of the twenties had a quality of glittering artificiality. It was a boom decade, a decade of rising prices and incomes, a decade, on the whole, of inflation. There was some gambling with wheat futures, but a royal commission appointed in 1931 to investigate this situation found that it was not detrimental to the producer. Wheat production records were broken in 1928, and it looked as though the prairie provinces had nothing to fear. Indeed the federal government began negotiations by which the western provinces received control of their own natural resources in 1930.

At the time the Dominion of Canada took over control of the Northwest, no basis existed for self-government in the future provinces of Alberta and Saskatchewan, and very little in Manitoba. Had the West been dependent on its own residents for a settlement policy, development would have taken place much more slowly and possibly with much more civil disorder and confusion of titles. However, once the provinces were set up they began to wish control of their own destinies. This was accomplished by the end of the twenties. The date marks the end of the second stage of prairie history. The early fur economy and hunter-trapper civilization had been replaced by a major one-crop wheat economy and a minor local one-crop beef economy. Within the frontier atmosphere a highly individualistic and challenging farm civilization had developed. The foundation stones for a more varied and planned economy were already on hand but it took the Great Depression to clear the ground and World War II to provide the impetus for the laying.

14 *Union for Strength*



IN spite of distances and bad roads, people in a frontier community came together for social purposes quite frequently, often from miles around, and many amusing stories are told of some of these early rallies. A favourite prank of the young bloods was to change the outer clothing of the babies who might be left sleeping in the store while papas and mammas danced in the schoolhouse, and thus send parents home with the wrong offspring. After one of the historic bachelor parties at the Beckton Farm at Cannington Manor some young fellows, walking home late, became drowsy and turned in at a farmyard hoping to find a place to sleep. Not wishing to disturb the slumbering householders, the merrymakers went into an out-building and bedded down on some inviting-looking sawdust. But soon they noticed a sudden and shocking change in the weather; they could not sleep on account of the cold. The revellers shivered and suffered until morning and then everything became clear. They had tried to sleep in the farm ice-house.

Loneliness could be very trying; it drove some young men from the homesteads. Too often the pioneer's cabin lacked even cat or dog pets to alleviate the monotony, and when one of the

frontier's free enterprisers shipped several crates of cats from Ontario he was able to sell them at five dollars each. A cat couldn't wash the dishes but at least it could furnish company and make a place more homelike.

Very early, however, the settlers learned the importance of association for more serious business than purely social intercourse or the extra work required at threshing time or to handle the emergencies that arose when a neighbour was ill or had lost his buildings in a prairie fire. The Red River Hunt had been one of the earliest co-operative economic enterprises. We have already mentioned the early agricultural associations, fairs and sales, and experimental farms. Associations for the protection of legal rights and for handling business matters were almost as early.

The cattle ranchers were among the first to realize the need for such joint effort. In protecting the grass on the public domain, eradicating the menace of cattle rustling, stamping out mange, obtaining better security, and ensuring the most effective brand recording, the individual could do little. Cattle ranchers in the southwest began to co-operate by joining forces at roundup time. The roundup of 1879 and the next few years was not formally constituted but it functioned as a co-operative enterprise. It served to prevent duplication of roundup efforts which would mean more work and more wear on the cattle. It ensured order and efficiency in combing the range. It provided rules, such as that no one could begin a roundup before the accepted date. With many mavericks on the range, anyone who started an early roundup or an early branding was inviting suspicion.

The loosely formed but rigidly administered roundup associations gave birth to the South-West Cattle Association and the Alberta Stock Growers' Association, both with headquarters at Macleod. In 1896, the Western Stock Growers' Association was formed to embrace all the local stock associations in that section. When the Western Stock Growers' Association celebrated its fiftieth anniversary in 1946, it could look back upon

continuous service in obtaining more favourable legislation, suppressing cattle rustling, improving brand regulations, and promoting the interests of the cattle growers.

The grain farmers seemed to encounter more difficulty in finding any permanent basis on which they could get together. The Grange, powerful in the United States, and popular in Eastern Canada for a time, had locals at High Bluff in 1876 and other points in the ensuing years, but they did not last. The Manitoba and North-West Farmers' Union, organized in 1883, agitated for government grading of grain, reduction of tariffs, and construction of a railroad to Hudson Bay. The objectives were worthy, but the organization was short lived. The Farmers' Alliance, a United States movement like the Grange, made a drive in Manitoba and reported ten branches and about 500 members in the districts north of Winnipeg. Then came the Patrons of Industry, which seemed to be making good headway until 1896 when the movement's candidates were rather badly beaten in the general election. All efforts met the same fate. The grain farmers could enjoy the loose association of an agricultural society, which aimed at mutual improvement but imposed no restrictions. They were not able to come together in any really cohesive group until forced by necessity. And the necessity, when it arose, had to do not with the problems of operation within the industry itself, as had been the case with the cattle ranchers, but with handling and marketing of the crops.

Something has already been said in Chapter 6 of the development of the grading system and the organization of transportation, without which the wheat empire could not have been established. Of the powers behind this development and organization the settlers were at first only vaguely aware. Even when they became resentfully conscious that their interests were not always identical with those of "big business," so called, their first thought was only to obtain government regulation to compel more co-operation. The idea that they

themselves, or the government, might take over some of the functions of "big business," arose very slowly.

When the early western grain grower talked unkindly of the the grain trade, he thought of banks and financial houses, elevator operators, milling concerns, and transportation companies, and particularly of the members of the Winnipeg Grain and Produce Exchange. Yet all these had played a useful part in the development of the industry. The Winnipeg Board of Trade had fought the battle for the recognition of western grain varieties and grades, for western inspection, and statutory regulation of its own grain trade. Even if this had been merely an essential part of the battle for the recognition of western traders and for their control of the western trade it did much to help western grain take its place on world markets. The Grain and Produce Exchange, which grew up more or less under the wing of the Board of Trade, did valuable work in defining trade terms and correlating various interests. It arranged for Canadian grain to be bonded through the United States by rail to a lake port. It established telegraphic codes for its own members and communications with other markets. It regulated the sale of futures. It compiled useful statistics. In short, it took all the steps necessary to enable grain dealers to operate at a profit, and thus it benefitted the farmers by providing them with a ready market.

Unfortunately, this centralization of power at a point somewhat remote from the actual farmer and in the hands of business men who did not always realize his problems produced a feeling of distrust in the agricultural community which soon grew to antagonism. The relation was too close between the financial houses, the grain dealers, the milling companies, and the railroads. Many of the milling companies operated their own elevators. The associated dealers were in a position to fix prices. The railways would not accept loading except through the elevators. There was a monopolistic flavour about the whole thing. Thus the first decade and a half of the twentieth century were marked by conflict between the interests of producers and

distributors. The farmers claimed that they were being mercilessly exploited, that when they sold their grain they suffered from excessive dockage, short weights, high storage rates, low grades, and reduced prices, and that elevator owners enjoyed a practical monopoly through the refusal of railways to allow erection of flat warehouses where standard elevators were already located. The farmers were also perennially dissatisfied with the supply of railway cars.

In 1900, following the report of a royal commission, the federal government passed the Manitoba Grain Act. This upheld the farmers' right to set up flat warehouses and load direct from standard platforms. It established the Car Order Book to ensure fairer distribution. And it appointed a Warehouse Commissioner with wide powers. Even earlier the government had obtained special western freight rates from the C.P.R. by the Crow's Nest Pass Agreement, and in the year after the passing of the Grain Act similar concessions were obtained from the Canadian Northern by the Government of Manitoba. A few years later, the federal government appointed the Board of Railway Commissioners with authority over rates, tariffs, and services.

The Grain Act of 1900 did not bring the relief expected. The railways appear to have ignored the clauses of the act dealing with distribution of cars, and a shortage in the autumn of 1901 produced a crisis. The elevator companies had been organized into the North West Elevator Association, and the farmers seemed to be at their mercy.

Wheat wasn't moving. It was a wheat blockade, and every farmer and homesteader across the West was anxious. Premier Haultain of the Northwest Territories and Premier Roblin of Manitoba were to attend a meeting at Indian Head on December 18, 1901, to discuss current issues. Homesteader W. R. Motherwell and his fellow fighters thought it would be a good time to start a movement. Lone voices had been heard "crying in the wilderness" long enough. The farmers who remained for Motherwell's meeting were angry enough to organize and they

elected "W. R." as provisional president of the new Territorial Grain Growers' Association, forerunner of the Saskatchewan Grain Growers' Association and the Alberta Farmers' Association which were set up after the creation of the new provinces in 1905.

Motherwell meant business and was not opposed to a demonstration of determination. Those who were looking for action had not long to wait. A court action was taken against an agent of the Canadian Pacific Railway for failure to distribute cars according to the Grain Act. It was a test case, and it attracted more interest than a Portage la Prairie ploughing match. Legal defeat of the farmers was anticipated. Odds were two to one in favour of the railroad and local people were betting everything, including money. The case was heard at Sintaluta and the farmers won the decision. Although the case was appealed, a higher court sustained the judgment. This great victory echoed across the homestead country like the rumble of a hail storm.

Early in 1902, J. W. Scallion of Virden invited Motherwell to address some Manitoba meetings with the idea of organizing the province. A local was formed at Virden; others followed and a provincial organization was constituted at Brandon in March 1903, with J. W. Scallion as president and Roderick McKenzie of Brandon, as secretary. Twenty-six locals were represented at this first Manitoba Grain Growers' Convention.

The organized farmers wanted justice in marketing their grain. They were determined to improve their position in dealing with privately owned elevators and the Grain Exchange. A. E. Partridge was the moving spirit in the campaign. He could be crusader or warrior as occasion demanded. He advocated a co-operative selling plan and, in 1906, the Grain Growers' Grain Company was organized on co-operative lines and took a seat on the Winnipeg Grain Exchange.

But the farm company did not hold its seat on the Exchange for long. It was promptly expelled on the technicality that it had promised a patronage dividend to its members, which

violated the one cent per bushel commission rule of the Exchange. The company was obliged to abandon this feature of its business before, with the assistance of the Manitoba Government, it could be re-admitted to the Exchange. But the most evident effect of that trouble was to strengthen rather than weaken the farm organization.

Alberta farmers were watching closely. In 1905 just before the province was set up they had formed the Provincial Society of Equity along American lines and a few years later this group joined with the Alberta Farmers' Association to form the United Farmers of Alberta.

Meanwhile the Grain Exchange as well as the railways was made the object of legal attack. There is an up-to-date sound about the whole affair. The Manitoba Grain Growers' Association secured the indictment of members of the Exchange and of the Northwest Grain Dealers' Association on the charge of forming a combine in restraint of trade. A federal commission had reported that the Northwest Grain Dealers' system of buying grain at country stations only on closing prices of the Exchange amounted to a restriction of trade, but after a prolonged trial the court declared the company innocent of conspiracy. In 1908, however, the Manitoba Government amended the charter of the Exchange to permit appeal from its decisions to the courts and to forbid restrictions on prices and commissions. This led to the dissolution of the Winnipeg Grain and Produce Exchange; it was succeeded by a voluntary unincorporated association known simply as the Winnipeg Grain Exchange.

Operation of country elevators was the next step taken by the organized farmers of the West. Complaints had been made about weighing, storing, dockage, and grading, and farmers said "there must be a change." Provincial governments were asked to go into the elevator business but Cabinet ministers did not show much enthusiasm. The Manitoba Government was finally prevailed upon to launch the elevator experiment, and between 1909 and 1912 some 170 elevators were acquired or

built as a public utility. But losses were heavy and in the latter year the elevators were leased to the Grain Growers' Grain Company.

In Saskatchewan, a commission appointed in 1910 to study grain marketing thought favourably of an experiment in co-operative ownership of elevators. Necessary legislation was passed, and the Saskatchewan Co-operative Elevator Company was incorporated in 1911. Ownership and control were vested in the farmers but financial assistance in the form of a loan was provided by the Government. Farmers and shareholders were asked to pay 15 per cent of the subscribed capital, the Government putting up the balance, which was to be repaid in twenty installments. In the first year of operation there were forty-six locals and 2590 shareholders; 3,261,000 bushels of grain were handled with a profit of \$52,461. The farmers were happy, and watched the profits paying for their elevators. Alberta followed the example of Saskatchewan by establishing the Alberta Farmers' Co-operative Elevator Company in 1913.

Meanwhile the cattle men were developing co-operative activities. To the Saskatchewan Stock Growers' Association which began in 1912 goes the main credit for the founding of the Saskatchewan Co-operative Stock Yards at Moose Jaw in 1919 and the Annual Feeder Show which was held there annually from 1923.

The sheepmen of the range should have formed a Protective Association in the eighties but perhaps the belligerent cattlemen of that period didn't let them stay in one place long enough to get organized. In 1914, when the sheepmen of southwestern Saskatchewan and southern Alberta were being offered 10 to 12 cents a pound for wool, irrespective of grade and quality, they gathered in the Maple Creek office of George Herringer to plant seeds of the Canadian Co-operative Wool Growers. Herringer was authorized to take complete charge of sales, and competitive bids drove the price up to 15 cents, then to 20 cents, and finally to 25 cents before a sale of 200,000 pounds was made at a compromise price of 26 cents a pound.

Prompted by the federal and provincial Departments of Agriculture, six more districts accepted the Maple Creek lead and organized with the least possible delay. Within the next four years they had organized the Canadian Co-operative Wool Growers' Limited, which marketed two million pounds of wool in 1918 and grew bigger every year.

Throughout this period the Grain Growers were looking for new worlds to conquer. They secured a terminal elevator at Fort William and one at the West Coast. Having attained success in co-operative selling, they decided to try co-operative buying. They began with lumber and coal and added a long list of other things farmers needed, fruit, flour, salt, wire, posts, binder twine, cement, oil, and farm machinery. Later the Saskatchewan Co-operative also erected a terminal plant and established a subsidiary export company.

Then, in 1917, the United Grain Growers' Limited was formed by a union of the Grain Growers' Grain Company and the Alberta Farmers' Co-operative Elevator Company, which began in 1913. T. A. Crerar was the first president of the new and bigger organization. The Saskatchewan Co-operative Elevator Company did not join but it had grown so rapidly that it was now practically as large as the new organization. In the same year the Canadian Council of Agriculture, first formed in 1909 to express farm opinion on political matters, was reorganized with Roderick McKenzie as permanent secretary.

The extension of government control inevitable in wartime had its effect on the Canadian grain trade. The Canadian Government acted as intermediary for the western farmers in making sales to the grain purchasing agency set up by the British Government, and in 1917 appointed a Board of Grain Supervisors with wide powers for the regulation of prices and general control of the trade. By the work of this board the price for the 1917 crop was kept fairly uniform and when the United States set a price, it was close to that originally suggested by the Canadian Board, and from fifteen cents to twenty-one cents a bushel higher than the figure the Americans would have pre-

ferred. The purpose of the Board was not to hold down prices, nor, conversely, to increase production by too high prices, but primarily to prevent speculation and wide fluctuations.

At the close of the war the Board was discontinued, but the United States fixed a price again for the 1919 crop, and the chief importing countries were still controlling their purchases, so a government-appointed Wheat Board was set up with complete control of the movement of Canadian wheat. It was, in a sense, a gigantic pool. The producers liked it but the Government was anxious to get out of the wheat business. In the summer of 1920, the Board was discontinued, and the open market was restored.

The comparatively good crops of 1921 and 1922 sold at prices which had dropped nearly twice as much as the general wholesale price level. The farmers pressed for another Wheat Board. The seriousness of their situation is indicated by the fact that the carry-over of farm loans in Alberta banks increased from \$17,000,000 to \$52,500,000 between 1916 and 1922. But the law officers of the Crown held that except under wartime conditions, the establishment of a Wheat Board would be an interference with property rights which are under provincial control. In the summer of 1923, when hope of obtaining a government board for that year's crop was gone, the farmers decided to act for themselves.

Aaron Sapiro was invited to the prairies to tell about producer co-operatives organized in the United States to market cotton, wheat, citrus fruits, and poultry. Sapiro electrified his listeners. It was late in the season but interest had gone as high as the Eiffel Tower, and it seemed to justify organization. Three voluntary provincial pools were planned, based on a rigid five-year contract, with a central selling agency. In less than ninety days, Alberta organized a wheat pool which marketed 35,000,000 bushels. Saskatchewan attempted to secure a five-year contract covering six million acres of wheat in twelve days. The objective was not reached that season but the ground was covered again in the spring of 1924 and by June 26, the objective of 50 per cent of the provincial wheat acreage, repre-

sented by 46,509 contracts, had been signed up for a five-year period. Manitoba, too, completed organization in 1924 and in July the Canadian Co-operative Wheat Producers Limited, better known as the Central Selling Agency, was formed from the three provincial pools. Responsibility of the central organization was sales and that alone. A. J. McPhail was the first president of the Saskatchewan pool and first president of the central agency; he was re-elected to those offices annually until his death on October 21, 1931.

Thus the farmers of Western Canada were controlling the marketing of more than half of the wheat crop grown in the largest wheat area in the Empire. From the 1925 crop, the Canadian Co-operative Wheat Producers marketed, at home and abroad, no less than 187,000,000 bushels of wheat, and up to and including the crop of 1929, the total sales were above a billion bushels.

Shortly after the pools were organized, the policy of acquiring and operating elevators was adopted. Ownership of elevators seemed essential to the general plan. The Saskatchewan organization built or bought 91 country elevators in 1925 and in the next year bought out the Saskatchewan Co-operative Elevator Company with its 451 country elevators and four terminals. The price was just over \$11,000,000. When the crop of 1926 was coming forward the Saskatchewan Pool was operating 586 country elevators and four terminals at the Great Lakes.

The opposition to the grain trade was only one phase of the farmer's general suspicion of a government which treated the prairie provinces as colonies, as witness its control of their natural resources, and operated them, he felt, in the interests of the eastern capitalist and industrialist. It is a point of view well put by Beames, to quote again from *Army Without Banners*:

There was no price for anything. Dressed beef brought three cents a pound, dressed pork five, butter and eggs were difficult to dispose of at any price. Wheat, oats, and potatoes had to be hauled forty, fifty, sixty miles to town and sold for what they would fetch. . . .

The grain companies and the cattle buyers cheated the settlers systematically. The implement companies ["Many settlers," says Beames elsewhere, "passed into a state of virtual slavery to the implement companies, working without hope, seeing all the fruits of their labours swallowed up in interest payments;" and he describes his hero's struggle with a collector and his wife's refusal to let him sign a mortgage which would tie up the whole farm with the payment of his notes], the mortgage companies, the banks, reduced them to slavery, and wrung out the last cent of interest like drops of blood.

Bruce Hutchison picks up the same resentment thirty years late in depression days (*The Unknown Country*):

Here was a man who worked harder than any labourer in the factories of Ontario . . . who had to plow, disc, seed, reap, and thresh two or three acres merely to pay for a small mechanical part to repair his tractor, when it could be bought for a fraction of the price on the other side of the American boundary, the tariff wall.

He spoke of some obscure part needed for his tractor now. It would cost \$25. If he could get it from the States, without paying the tariff, it would cost maybe \$10 or \$5. This is the tribute that the prairies pay to the eastern manufacturer, who, in return, must keep the prairies on relief.

This essential opposition of economic interests between Eastern and Western Canada was an important factor in strengthening economic co-operation in the West, and during the twenties it was responsible for the Progressive movement in politics. This was simply another phase of the battle for economic stability, and no account of western attempts to gain strength through unity is complete without some reference to it.

A Farmers' Platform had been announced by the Canadian Council of Agriculture as early as December, 1916, endorsed by various farmers' conventions in 1917, and revised under the title, "New National Policy," in 1918. In the following year, in protest against the high tariff, and under the leadership of T. A. Crerar, a Progressive group was formed in the federal house with eleven members, eight of them from the prairies. The provinces rallied to the support of this movement. Farmer governments were formed in Alberta and Manitoba. In the federal election of 1921 the farmers won 65 seats, more than half of

them in the West, and held the balance of power between the Liberals and Conservatives.

As prosperity returned, however, it proved difficult to hold the Progressive group together. The Alberta members in particular were opposed to formal party organization, owing chiefly perhaps to the influence of Henry Wise Wood, who, according to the diary of A. J. McPhail, advocated the "policy of group economic class organization as the only sound basis upon which to build a democratic form of political action." By the election of 1925 the Progressive movement had lost a good deal of its force. Its representation was cut to less than half of its former strength, and before long most of its members were reabsorbed into the older parties.

The protest movements which grew up during the depression were no longer purely agricultural in their appeal, in spite of the fact that the Social Credit party long found its only considerable success in Alberta. The CCF (Co-operative Commonwealth Federation) is at least as much labour as farmer, and contains many professional people, being held together rather by ideas and ideals than by direct economic interests. Premier Aberhart of Alberta (Social Credit) drew much of his crusading spirit from his religious background, a spirit to which the Westerner responded warmly. The genius of the Canadian people does not seem to lend itself to group government, and the fact that the farmers' political movement showed such strenght even for that short period in the early twenties indicated the depth of western resentment against what was considered eastern exploitation, and the firm conviction of the Westerners that they were fighting for social and economic justice.

Like many other business organizations, the western wheat pools suffered terrific reverses in 1929 when economic depression was settling down upon the world. The Central Selling Agency had declared an initial payment of a dollar a bushel on the 1929 crop but in the winter which followed, wheat dropped steadily and provincial governments were called upon to

guarantee advances made by the banks to the pools. As a result the pools incurred huge debts to the provinces. The overseas market was paralyzed and the Central Selling Agency was obliged first to close its overseas offices and in 1931 to cease operations altogether. The policy of "direct selling" was dropped, and because the initial price which the pools would be able to pay on the 1931 crop (35 cents a bushel, basis No. 1 Northern, Fort William), was so low that many farmers could not have carried on, the method of marketing was made optional. Growers might pool their grain or not as they preferred, but all were urged to put their grain through pool elevators.

The pooling principle was thus abandoned, but the western pools continued to operate as elevator companies. In 1949, pool elevators in the three midwestern provinces numbered 1,898, with a total capacity of 100,000,000 bushels. And total assets of about \$40,000,000 for the three provincial pool organizations, with little of the 1929 debt remaining, told a story of progress. Nobody told the story better than W. A. MacLeod, Director of Publicity for the Canadian Co-operative Wheat Producers Limited, who had been close to the movement from its inception. In his Christmas message, 1949, he wrote:

Success stories are a good tonic in worrying times. The boy who sets out without a dollar, has perilous adventures, narrow escapes, and makes a million, is our favourite hero.

A quarter of a century ago, a bunch of farmers in Saskatchewan and Manitoba decided to start a grain marketing system of their own called "Pools" because they did not care very much for the existing system. Alberta farmers had started a year before.

They prospered exceedingly, marketing more than half Canada's wheat crop. But when the stock market bubble boom burst in 1929 and all values crashed, the Pools found they had overpaid their members twenty-two million dollars more than they could get for the wheat.

Now this entire debt, principal and interest, has been paid, forty million dollars paid in patronage dividends, and Pool farmers find they own eighteen hundred and eighty-four country elevators holding more than ninety-eight million bushels, eight large terminals with storage capacity of more than thirty-three million bushels. Starting from scratch the Pools have fixed assets worth more than fifty-five millions.

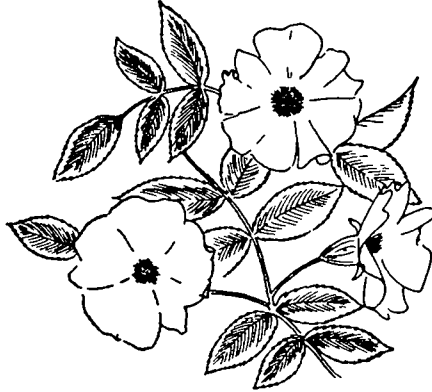
The gain to all prairie producers through lower handling costs

brought about largely by Pools, the improvement in rural and community morale, cannot be estimated—just guessed at.

Those who opposed the grain pools of Western Canada made capital of certain ill-advised policies followed in earlier years. Twenty-five years after the first pool began to operate, the subject could still create heated controversy in some quarters. But with due allowance for mistakes and misfortunes, and criticisms freely offered, the grain pools of Western Canada still represent the biggest agricultural co-operative enterprise in the world and stand as a memorial to those who founded them and kept them operating.

Canada had experienced various producer organizations, but there was need for a national and unifying body. The Canadian Federation of Agriculture emerged to become the crowning achievement. The Canadian Chamber of Agriculture was born while the Royal Winter Fair was in progress in 1935, and was later rechristened to become the Canadian Federation of Agriculture. It represented the farmers' best attempt to achieve national organization, non-partisan and democratic. The Federation did not suffer from bashfulness; its voice was heard in the highest councils of the nation, and its prestige grew.

15 *A One-Crop Country?*



THE one-crop economies of the wheat and cattle kingdoms were seldom questioned by their supporters except when depression or disaster struck. Then there was a pronounced swing away from the crop which had so basely betrayed its trusting adherents. This tendency made itself felt very early among the cattlemen, with unfortunate results. It came later but no less surely among the wheat-growers.

Events in the early years of the century worried the cattlemen. The Government and the Canadian Pacific Railway were committed to policies of immigration, and land settlement was being pressed with more vigour than good judgment. Barbed wire was setting apart many isolated quarter-section farms in the midst of grazing areas. Such homesteaders would frequently locate on river flats, along streams or beside springs, and cut off the natural watering places. Furthermore, their fences intercepted cattle drifting in storms and often prevented them from reaching a place of protection.

The ranching fraternity, especially the older people who could recall the good old days of open range when a "critter" could graze for a hundred miles in any direction without encountering a barbed wire fence, didn't like the way things were

going. The ranchers were congenial people and liked neighbours, but they didn't like them too close. Said one, "When you can hear your neighbour's dog barking or see the smoke from his chimney, it's time to move."

Not only was the rancher being deprived of land which he knew was not suited to anything but grazing, but he had the unpleasant feeling that he was being forgotten by the policy makers, and was inclined to "beef out" by marketing more than usual of female stock. Then at a moment when he felt most insecure, a severely bad winter came down upon him. The winter of 1886-1887 had been considered the worst in range history but 1906-1907 seemed almost worse.

This latter was a winter of heavy snows, repeated blizzards, and severe frosts. Most ranchers had winter feed but few had enough for so much winter. Cypress Hills cattle drifted as far south as the Missouri River and Alberta cattle were scattered similarly. John Oman related that the Turkey Track outfit, which came into southwestern Saskatchewan with about 15,000 head in 1905, was able to round up only 5,000 in the spring of 1907. H. F. Maunsell, who came to the Chinook country in 1881, reminded friends who sat with him at the Annual Range Men's Dinner at Calgary in July 1948, that he wrote off just 12,000 head of cattle that winter. Nearly 50 per cent of the cattle on the Canadian ranges perished; and those people who, in every generation, keep themselves in fine physical fettle by jumping at conclusions, said, "Ranching is all washed up; cowboys must learn to plough and use five-tined forks." Some people in high public places shared that view and made the mistake of saying so.

As a result of that bad season, many ranchers sold out and the influx of grain farmers was accelerated, many of them settling on soil which should never have been broken by the plough. It was the turn of the wheat grower to ride high, wide, and handsome when the crops and markets were good, and to turn to diversification when things went temporarily sour.

Although wheat was the crop best suited to the prairies, the most economical to produce, and in general the most readily marketable, it was by no means the only crop the prairies could grow. Blakiston had found pumpkins and melons growing at Red River in 1859, and when John Macoun visited the Northwest he wrote with characteristic enthusiasm:

Turnips and carrots grow to a fabulous size, and potatoes surpass anything ever seen by an Irishman in his own country. The rich river bottoms are just the place to raise these, and every ranch (cattle farm) will eventually have its thousands of bushels of roots raised at a nominal cost to supplement the hay or grass of the hill pastures.

Fruit was something else. It had no place in crop rotations, but it was an offset to any threat of one-crop economy in half a nation. The prairie people were slow to realize that they could grow it, however. Working to find better kinds and break down frontier fallacies about fruit were men like A. P. Stevenson of Morden, S. A. Berford of Brandon, C. F. Patterson of Saskatoon, George F. Chipman of Winnipeg, W. R. Leslie of Morden, F. L. Skinner of Dropmore, and Seager Wheeler of Rosthern. And south of the border was Professor N. E. Hansen, whose researches proved especially valuable on the Canadian side.

Stevenson planted fruit trees at Morden in 1874 and H. L. Patmore, who became identified with the nursery business, supervised the first plantings at Brandon Experimental Farm in 1888. But the apples, plums, and cherries set out at Brandon killed back in the first winter. Only the roots of the hardier sorts survived. It was clear that hardiness was essential and that research was needed.

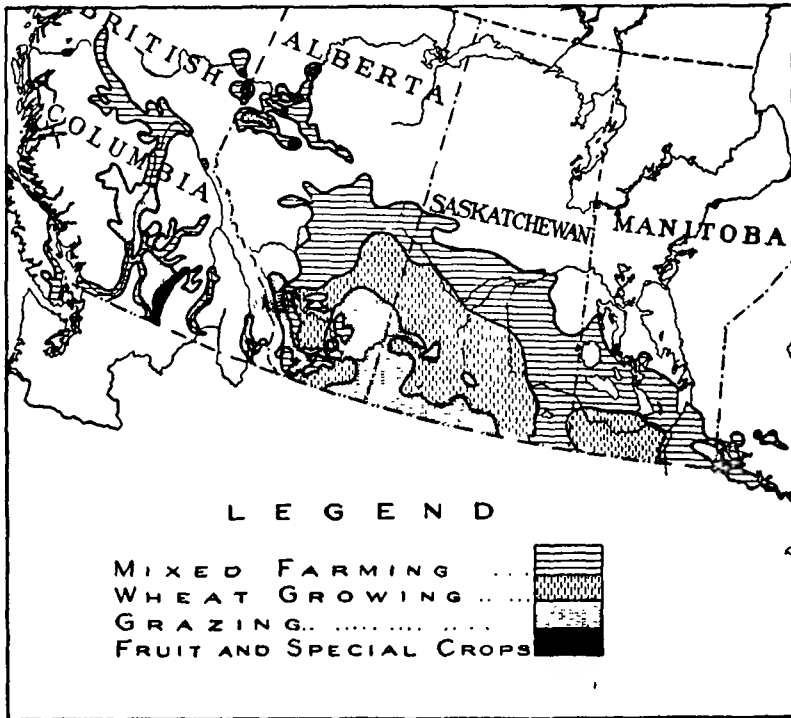
Dairying in some form had gone hand in hand with settlement but progress had been spasmodic. The Red River settlers had made butter and cheese and if production exceeded requirements at home, they had traded with trappers and travelers. Cheese could be transported with ease. It possessed a determination of character, unlike butter, which with no pasteurization and no refrigeration, was ready to yield to time,

temperature, and smells. Sometimes the latter reached the point where the butter no longer held any attraction for a respectable piece of bread, and some of it ended in soap. But there was no industrial dairying in the West until 1882 when two cheese factories were opened in Manitoba, one at Stonewall and one at Rapid City. Another cheese factory was started by Ebenezer Healy at Springbank, just west of Calgary, in 1888. This was the first plant in the Territories and fifty years after its opening the site was marked with a cairn erected by the Alberta Dairymen's Association and the Provincial Department of Agriculture.

Rebellion year, 1885, seems to have been important in dairying. The first western creamery was started at St. François Xavier in that year. The Manitoba Dairy Act was passed, and the Manitoba legislature voted \$2,500 for dairy instruction. Nor was that all. One of the most spectacular events in western dairying in that troubled year was the introduction of a cream separator. Hon. Walter Clifford, who lived at Austin, was the importer of the mechanical curiosity. It was only three years since the first centrifugal cream separator to be used on the continent had been imported from Denmark and installed in a creamery in the province of Quebec. Hon. Walter Clifford's was the first west of the Great Lakes, and an official delegation from the Manitoba Government journeyed to Austin to make a study of its operations and determine what advantages it had over the age-old practice of "setting" the milk in cans and creamers.

While the people in the Chinook belt were becoming increasingly enthusiastic about cattle ranching, Manitoba was becoming "dairy-minded." The Manitoba Dairy Association was organized in 1886 and new plants for cheese or butter manufacture sprang up.

One of the exhibits of interest at the Territorial Exhibition at Regina in 1895 was a thousand-pound cheese made in a cheese factory at Innisfail. The idea seems to have been inspired by a gigantic cheese produced in another part of Canada and shown at the World's Fair at Chicago two years before.



MAIN TYPES OF FARMING IN WESTERN CANADA

From Canada Year Book, by permission of the Editor and the Queen's Printer.

This big cheese, made at Perth, Ontario, represented the joint efforts of twelve cheese factories, each of which delivered two days' curd. J. A. Ruddick, later Dairy Commissioner for Canada, was the cheesemaker. A total of 207,200 pounds of milk went into it and the finished cheese was six feet high and twenty-eight feet in circumference, and weighed eleven tons.

The production of fluid milk for retail purposes assumed increasing importance in all areas surrounding towns and cities. Every western city had its pioneer milk distributors. Charlie Jackson, who followed an ox-cart from Brandon to the foothills in 1882, was the pioneer milk trader in Calgary. He rounded up some range cows which were nursing calves and borrowed a few more from Cochrane Ranch in 1884, and started a milk route. Jackson's cows were wild and objected violently to the touch of human hands. They refused to "let their milk down" except when their calves were released to nurse. But Jackson was determined and while a calf was working on one side of a cow, Jackson was working on the other. The milk was transported in two five-gallon cans and measured out to customers at ten cents a dipperful. The dipper was reputed to hold a quart but there was then no Federal Department of Weights and Measures to check on it.

Dairying made its advances and by 1943 the four western provinces could report close to 150 million pounds of creamery and dairy butter per year. Dr. F. H. Auld, who for thirty years served Saskatchewan as Deputy Minister of Agriculture, recalled that in 1906 his province had five creameries with a butter output of 225,000 pounds, while in 1943 Saskatchewan's creamery butter production was 47,000,000 pounds.

The breeders of dairy cattle were not behind the beef men in the struggle for breed improvement. They had the advantage of milk scales and the Babcock tester, and several fine European breeds appeared early on the western scene and did well there. Two Ayrshire cows and a bull brought over by the Hudson's Bay Company in 1848 may not have made any contribution to

posterity, but these symmetrical and proud cattle of the Scottish dairy breed came again about the time the rails reached Winnipeg; a Manitoba farmer by the name of Grummet was the first to have them. A few Jerseys came also, but Holsteins were destined to be the greatest success.

The first purebred Holstein-Friesian cattle came to Canada in 1881, not from their native Holland, but from the United States. Two cows and a pedigreed bull named Lord Selkirk were brought to Manitoba from Minnesota by harness-maker Archibald Wright in 1881, and thus the breed reached Western Canada about the same time as it arrived in Ontario.

Herds like those of the Canadian Pacific Railway at Strathmore, Hays and Company at Calgary, and Rockwood Holsteins in Manitoba, produced cattle capable of winning All-American recognition. These big-framed, docile, milking cattle set new standards in show-ring type and won international honours for production.

Testing for production was one of the effective aids in dairy cattle improvement. The Holstein-Friesian Association offered Record of Merit testing to breeders in 1901 and the Dominion Department of Agriculture offered Record of Performance to all breeds of purebred dairy cattle in 1904. These gave a distinct impetus to improvement and the great North American pastime of breaking records became fashionable.

Canary Korndyke Alcartra astonished the ultra-conservatives who clung to the view that high production and Saskatchewan winters were incompatible. While still a calf, Canary was brought West by the dean of Holstein-Friesian supporters, S. G. Sims of Stonewall, and sold to B. H. Thomson of Moose Jaw, who had arrived in 1883 and was therefore almost a native son. Under Thomson's skilful hand Canary in 1928 produced 26,396 pounds of milk and 1,080 pounds of butterfat in 305 days in her four-year-old form, to become a world's butterfat champion. What is more, she did it on home-grown feeds, sunflower silage, sweet clover hay, oat straw, oat grain, and bran,

with a mineral supplement of bonemeal and salt. To ensure that she would not be lost to Canada, the Saskatchewan Government bought her for \$10,000.

In 1945, just 64 years after the Cochrane herds broke trail into Alberta and 64 years after the first Holsteins reached Western Canada, an Alberta-bred Holstein cow, Alcartra Gerben, eating Alberta-grown feeds, made 1,409 pounds of butterfat in 365 days to become the champion butterfat producer of the world. It was a notable triumph for the Hays herd in which the record was made, and it was another evidence that the West could produce the best in livestock as well as in wheat.

The prairies also afforded good sheep range despite the early difficulties of the Red River settlers and others. Joseph McFarland, who brought dairy cattle to a squatter's farm near Fort Macleod in 1875, took five sheep to the district two years later. The little group was a "trial balloon," and one which was quickly deflated. Both coyotes and Indians found mutton an irresistible morsel and McFarland and those around him were satisfied to forget about sheep for the next few years. But Montana had huge flocks of range sheep and an imaginary boundary could not keep them out of grass-covered neighbouring territory. John Macoun, reporting in 1882, believed there was a fortune in this business.

Sheep farming has not yet been tried in the Bow River district, but there is no reason why it should not be as successful as in Montana, where an investment of \$15,000 in sheep pays 35 per cent. the first year, 47 per cent. the second year and 60 per cent. the third year.

Credit for bringing the first big band of range sheep to the prairie country must go to the same company that imported the first large herd of cattle, the Cochrane Ranch Company. Eight thousand were trailed from Montana in 1884. Next year, Frank White, a former employee of Cochrane Ranch, brought a band of 2,500 head from Montana and placed them on the Merino Ranch west of Calgary, where by 1890, the breeding stock numbered 5,000 head. Ira Brown herded 2,500 head of Montana sheep to Medicine Hat in 1887 and these may have been the first in that section.

The exact interpretation of the regulations which excluded sheep from Crown lands was never well understood and these regulations were never fully enforced. But the sheepmen and their flocks drifted hither and yon, gypsy fashion. As more land passed from the Crown to the railway, irrigation, and development companies, such areas as were unoccupied were invaded by sheep herders who were prepared to wander from place to place. This practice was known as "pirating" and those engaged in it were called "sheep pirates" or less genteel names.

Sheepmen had no friends in cattle country and with this antipathy, in the Alberta country, the centre of sheep ranching shifted to Maple Creek, Saskatchewan. In that area there was less competition from cattle and society was ready to accept a sheepman as a human being entitled to a vote. Andrew Wallace and Thomas Johnson imported a big flock of Montana sheep to graze between Maple Creek and Piapot in 1884, and in 1886 William Nichol placed a thousand ewes on the Sarnia Ranch at Walsh. From that time forward new flocks were started each season, mostly between Swift Current on the east, and Walsh on the west.

The importation of 10,000 head of Montana sheep for Sir John Lister Kaye's ranches in 1889 was the most important landmark in the history of sheep ranching in Canada. Sir John was a dynamic, pint-sized Englishman with money to back his optimism. He was associated with Lord Queensberry in a 7,000-acre farm at Balgonie. But it wasn't big enough for Sir John and in 1887 he formed the Canadian Agricultural, Coal and Colonization Company and secured ten blocks of land, each of 10,000 acres, along the Canadian Pacific Railway. He was going to grow wheat, beef, mutton, pork, and many other things. In short, he was going in for diversification.

Unfortunately, Sir John couldn't make it rain and the wheat refused to grow, but in 1888 he secured about 5,000 cattle from the Powder River Ranch Company of Wyoming and saw 500 head placed at each of his ten new ranches. The cattle carried the brand "76" and thus the ranches became known as the "76."

Next year Sir John got his sheep. They were driven north by

James Ross and William Riddle. The drive was made not very quickly but very successfully and at Maple Creek the sheep were turned over to William Rutherford, who had been named sheep manager for the "76." There the sheep were loaded on freight cars and sent to the various ranches.

The foundation ewes were predominantly Merino. That meant inferior mutton conformation but it also meant fine wool, hardiness, and the instinct to band together when grazing. Cheviot rams were introduced and 200 were imported in 1892. Leicesters, Cotswolds, and Merino-Cheviot half-breds were tried and then with the reorganization of the company in 1895, the breeding policy was completely overhauled. Eighty-seven Oxford and Shropshire rams were secured in that fall, it being supposed that the offspring from these would be more suitable for the English market.

Evidently the original plan to disperse the flock among ten ranches was considered a mistake because next year the bands were consolidated at Swift Current, Kincorth, and Gull Lake. When John Oman, a Scot who migrated to Manitoba to become a "landed proprietor," entered the service of the company as an experienced shepherd in 1892, there were 30,000 sheep including shearling and two-shear wethers. Judging from the 1891 census figure of 64,920 sheep in the Northwest Territories, one must conclude that nearly half of all the sheep in the Territories was owned by the "76."

Oman explained that the company had fifteen camps with 2,000 sheep at each and the line of camps extended for fifty miles. Shepherds were paid thirty dollars a month with a board allowance of twelve dollars. The annual bonus came at Christmas time and consisted of two bottles of Hudson's Bay whisky for each shepherd. Mr. Oman related that the head shepherd who delivered the bonus made it a point to remain around the camp for a couple of days "to ensure that the sheep were not neglected." The shepherd, a frugal man who volunteered in advance that he would use his bottled cheer only for medicine, reported later, "Mon, it was a queer thing that I was sick every day until the stuff was done."

Oman's first job was as assistant at lambing and shearing. The price for shearing was seven cents per head. Itinerant shearers who came up from the south worked rapidly, shearing 140 sheep a day, while the Scottish and English workers did 70 per day but "did a better job."

An outbreak of sheep scab, believed introduced by sheep from Idaho, gave the ranchers a severe setback in the next year or two. On its heels came falling prices and sheep were scarcely saleable between 1893 and 1897. This was the period of the "Great Sheep Depression," and here again there was suffering among those who had specialized too intensively. Such demand as existed was for heavy sheep. Good wethers would command up to three cents a pound at Winnipeg and breeding ewes might sell at three dollars each.

Shipments of sheep were being made to England after 1888 but on account of the outbreak of scab there was a temporary embargo. By 1895, the overseas market was open again and Sir John's company resumed shipments. It was estimated that not less than 25,000 head of sheep went overseas from the "76" ranches.

In spite of depression and scab, new flocks were being established in that period. Many of these were the property of shepherds who started in a small way by investing their \$25 a month wage, or shepherds who accepted sheep in lieu of wages during the depression. At any rate, by 1898, business had revived and prices had actually doubled over those of two years before.

The next worry was the outbreak of anthrax in 1901. Presumably the disease had been carried on the greasy clothes worn by professional shearers from Argentina. About half the horses, many of the cattle, and nearly 10,000 of the sheep on the "76" ranches died. Vaccination seemed ineffective and a number of the ranchers were forced to quit the business.

Anthrax didn't discourage the Knight family, which came from Utah to ranch in Canada in 1901. On November 5, 6, and 7, the Mounted Police checked Jesse Knight's flock which was on its way north and counted 41,565 head. From that time on

the Knights were Canada's biggest sheep ranchers and made a fine success.

The passing years furnished further proof of the value of sheep. No domestic animals could better utilize the vegetation on waste and inaccessible regions, and, when handled in large bands of a thousand or more, no animals consumed less labour. Sheep ranching, which was a shapeless thing through the early years, developed a "figure" and won a place of permanency in Canadian agriculture.

The first horses used by prairie settlers were buffalo-runners bought from the Indians, and horses of this same type were used by cattlemen and cowboys in their work on the big beef cattle ranches. But as grain growing and mixed farming developed and horses replaced oxen for farm work, heavier breeds became desirable. Once the railroad went through, pedigreed horses of the draught breeds came in great numbers, first the Clydesdale, the Scottish breed already established in Ontario, and later the Percheron and Belgian also. The importation and sale of stallions was carried on by a few vigorous individuals and firms such as Colquhoun and Beattie, Alex Galbraith, Trotter and Trotter, Vanstone & Rogers, W. E. and R. C. Upper, J. B. Hogate, Ben Finlayson, E. Pootmans & Sons.

Brandon was the horsiest city in Canada during the first two decades of the twentieth century. Every farmer raised colts and the most popular topics for conversation, as good citizens met at Beaubier's Stable or on Rosser Avenue, were the Clydesdale breed, bone spavins, the alleged superiority of rolled oats over oat chop, and the prepotency of the local syndicate's stallion Flash Baron.

W. H. Bryce, or "Scottie," as he was familiarly known, settled near Arcola shortly after coming to Canada in 1882. At the turn of the century, he was importing and breeding Clydesdales on a grand scale. In 1905 he imported the dark brown stallion Perpetual Motion, by the four times Cawdor Cup winner, Hiawatha, at a cost of \$3,750, a great show horse and breeder, which he sold to Hon. W. C. Sutherland in 1911. There

was keen rivalry for a silver cup offered annually at the Winter Fairs for the best groom and many of those competing sought to secure Perpetual Motion, because, as stated by Mr. Sutherland, "he was such a showy horse, he would usually win for his groom."

Baron of Arcola, most noted show and breeding stallion of his time, was imported by Mr. Bryce in 1906. The horse had been recorded as Keystone in Scotland and it cost £5 to have the name changed. Bryce would agree that re-naming a rose wouldn't change its aroma and that £5 should buy a boatload of sentiment, but his best horse had to have a local name.

Hillcrest Clydesdales, the property of B. H. Taber, were prairie leaders for some years. Principal influence at Hillcrest was the stallion known as The Bruce, selected in 1910. His fame and the general quality of the fifty or sixty Hillcrest Clydesdales attracted such visitors as Earl Grey in 1910 and the Duke of Connaught in 1912. Legend has it that the Clydes were unimpressed by such distinguished guests, and that they showed more interest when Alex Galbraith called.

There was no higher authority on matters pertaining to horses in the early West than Alexander Galbraith, a Scot who landed at Montreal in 1883. His headquarters for some years were in Wisconsin but he had branch barns in Brandon and ultimately in Edmonton. He knew every horseman and most of the horses in the West, and the most effective way of stopping a livery-stable argument was to quote Galbraith. The Mutch brothers in Lumsden, Saskatchewan, were also noted specialists in Clydesdales.

What was considered one of the finest collections of Clydesdales on the continent came to Saskatchewan in 1923. The Saskatchewan Government had agreed in 1919 to buy one or more outstanding sires in Scotland. Two yearling colts, Craigie Enchanter and Bonnie Fyvie, were bought in 1920 and delivered at the University of Saskatchewan. Unfortunately, one died a few months after arrival and the other developed stringhalt and was destroyed in 1926. The only bright spot in the picture

was insurance money with which to buy more horses. On February 1st, 1923, G. A. Cluett of New York wrote to Dean Rutherford offering an internationally famous string of Clydesdales at a fraction of their cost. Among them were the imported five-year-old stallion, Kinleith Footprint, Rosalind, a Cawdor Cup mare in 1916, Craigie Sylvia, who had been grand champion at the International, and others equally aristocratic. "If I could feel," wrote Mr. Cluett, "that the best of them would be kept for breeding purposes at your University, I would be willing to sell the entire lot to you for \$10,000, which, as you will realize, is only a fraction of their value." Mr. Cluett had paid more than that sum for Kinleith Footprint alone. The University bought them and the newly acquired stud, numbering thirteen head, arrived safely at its new home in Saskatchewan. Green Meadow Footstep, by Kinleith Footprint, was delivered as a foal with Langwater Jessica and became a great show horse, being grand champion at both the Canadian Royal and the Chicago International in 1925.

As an importer of outstanding stallions, Western Canada had few who rivalled Ben Finlayson. He made his first importation in 1909 and between that date and his death in 1933, his importations were many. During the early years of his business, his headquarters were at Claresholm, Calgary, and other Alberta points, but in 1918 he established himself at Brandon, a city whose horse traditions suited him. No better showman lived than Ben Finlayson. He was not very big, but he could make the great brutes step, and every horse that ever came down the tan-bark with him forced the judge's attention. Good stallions he imported included Dunure Norman, First Principal, Golden West, Lochinvar, Johnny Walker, Edward Garnet, Riccarton Landmark, Arnprior Emigrant, Sansovina, and Dunduff Chancellor. They were show horses and breeders all. In showing performance, Arnprior Emigrant, exhibited by the Reston Horse Syndicate in Manitoba, and Lochinvar, owned by John Falconer, were tops. The former was twice grand champion at the Canadian Royal and Lochinvar was grand

champion in 1928, 1931, 1933, 1935, and 1936, a record without parallel in the history of that show.

An important year in Percheron history was 1888 when George Lane bought thirty mares and two stallions in Montana and drove them overland to the Canadian foothills. Five years later he bought the Flying E ranch in the Porcupine Hills, and then, about the beginning of the century, he entered into partnership with Gordon, Ironside & Fares, to buy the Bar U for close to a quarter of a million dollars. All the while, his stud of registered Percheron horses was increasing and for some years the Bar U ranch boasted the largest stud of pure-bred Percherons in the world. At the time of Lane's death in 1925, he had 700 head of registered horses.

An important importation was made from France, the home of the Percheron breed, to Bar U in 1909. Seventy-two mares and three stallions were in the lot and the average cost in France was reported to be about \$1,000. In 1918, the Bar U made the first recorded shipments of Percherons from North America to Europe when twenty-six mares and a stallion were sent to England. The horses were well received and a larger consignment, fifty-three head in all, was shipped to England in the next year. George Lane did for Percherons in the West what J. D. McGregor did for Aberdeen Angus cattle and John Barron did for Shorthorns.

The Belgian horse was introduced to many sections of the prairie provinces through the efforts of Eugene Pootmans & Sons, a firm with headquarters at Antwerp, Belgium. Junior members of the firm arrived in Regina in 1910 with a number of native Belgian stallions and mares, opened a sales stable, and acquired a breeding farm four miles west of the city.

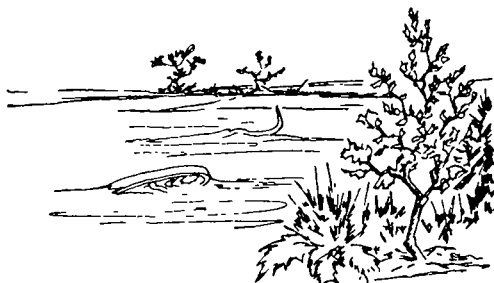
George Rupp, who came from the United States, founded his "Pioneer" Belgian stud in 1914. Two years later he had the biggest group in the Dominion. His stallion Paramount Wolver, bought in 1916, won general admiration. "Built like a battleship and active as a cat," people said about him. After using this horse and showing him for four years, Rupp sold the stallion

back to Iowa for \$11,400. Then he acquired Paramount Flashwood to win senior and grand championship at the International Belgian Horse Show in Iowa in 1919. When the 2300-pound horse died in 1922, Rupp said the loss was "partly offset" by a \$25,000 insurance policy.

Breed progress is closely knit with the record of the prepotent sires. Robert Thomas's Belgian stallion, Menseur, had a great deal to do with Belgian horse improvement in the West. Thomas adopted pure-bred Belgians in 1912 and when Monseur went to head his stud, he had many good mares. Monseur was a show horse but it was as a breeder that he had the chief claim to greatness. His best son was Paragon Major, twice grand champion at the Toronto Royal for Thomas. No finer tribute could be given to the prepotency of these two sires than the successes of their "get" at the Royal. The offspring of Monseur won the get-of-sire class at the Royal in 1922 and 1924, while the "get" of Paragon Major won the award in 1928, 1929, 1930, and 1931, thereby bringing this coveted honour to Robert Thomas six times in the first eleven Royal Winter Fair competitions.

It is apparent that the Canadian prairies need not be a one-crop country. Magnificent vegetables have been grown inside the Arctic Circle. Western pigs and sheep and geldings won grand championships in the proudest show-rings on the continent. Western cows have broken milk and butterfat records. Even Lady Victorine, a Barred Rock hen whose prairie home was in a section where forty-below weather was expected each winter, laid 358 eggs in 365 days to establish a world record. Such achievements, however, were the work of the few, and it was rather more difficult to induce the many to interest themselves in such matters except when driven by necessity.

16 *Depression and Recovery*



ONE of the foremost problems of the prairie wheat grower has always been moisture. Over the greater part of the settled farmland precipitation is ordinarily adequate, but in certain areas agriculture is hazardous without irrigation. And, unfortunately, some parts were settled by men incapable of judging soil and climate, under the influence of a blind general belief that there was money in wheat.

With fertile but dry soil it was natural that farmers would think about irrigation, and the process in Canada was not delayed as long as many other developments in scientific farming. In simple form it had been practised in the old world since Egyptians first turned the Nile across their lands, and some southern tribes on this continent are said to have irrigated their land before the coming of the white man. Early settlers in Utah, Nevada, and Idaho were quick to adopt the principle, and in Western Canada, foothills settlers early made use of the streams, which were more common there than elsewhere.

Most of the water for irrigation on the prairies originates in the mountains. Eight mountain streams unite to form the North Saskatchewan. Consequently, mountain water is better distributed in Alberta than in Saskatchewan, and the idea was readier to suggest itself there and easier to realize.

John Glenn squatted a few miles south of Calgary in 1875. Three years later he took water from Fish Creek to irrigate twenty acres. And still his name has escaped *Who's Who*. After another year or so, two settlers with the prepotent family name of Smith ran an irrigation ditch from the Highwood River, and then John Quick, an early rancher, ditched his land and took water from Sheep Creek with good success. The foothills farmers could irrigate with comparative ease and they became irrigation-conscious well ahead of the settlers out on the plains. The farmers about Springbank, just west of Calgary, organized for a district irrigation project in 1896 and took water from the Elbow River to irrigate 20,000 acres.

The North West Irrigation Act, designed to regulate irrigation on the prairies, became law in 1894 and thereafter the control of all water other than subterranean or percolating water was vested in the Crown, which meant that diversion or impounding of water from a stream was forbidden except by licence. That regulation remained unchanged and later came international agreement about the use of streams which cross the Canada-United States boundary.

Large irrigation companies began to operate. The Macleod Irrigation Company was the first to receive a Dominion charter. The Galt Railway Company was irrigating in 1897. Then there were the High River and Sheep Creek Irrigation Company and the Alberta Irrigation Company.

The Canadian Pacific Railway Company became the biggest irrigation operator on the continent. By the terms of its contract with the Dominion of Canada in 1881, it held the odd-numbered sections for twenty-four miles on each side of the main line. Sir William Van Horne was enthusiastic about irrigation, partly as an aid to national progress and partly as a means of selling land. An Act of Parliament in 1894 permitted the railway company to take its allotment of land between Medicine Hat and Crowfoot in solid tracts to facilitate irrigation. A solid block of about three million acres was ultimately taken east of Calgary. Water for irrigation in the western part of the C.P.R. land was taken from the Bow River not far from

Calgary. The project was started in 1904 and completed in 1911. Work in the eastern part of the C.P.R. block was undertaken next and an immense dam to raise the level of the Bow River was built about three miles south of Bassano. Water was released into these canals in the spring of 1914.

Irrigation received its next big boost from the Southern Alberta Land Company, an English company which had J. D. McGregor of Manitoba as Managing Director. The company was formed in 1909 and took over a large tract of land west of Medicine Hat, part of which had been held formerly as a grazing lease by Mr. McGregor. The land was secured from the Department of the Interior at a nominal price on the understanding that a certain acreage would be irrigated and approximately \$15,000,000 spent to develop it. Water was taken from the Bow River near Gleichen and conducted east and south through Snake Valley. Lake McGregor was the artificial lake and reservoir which resulted from the damming of the south end of that valley.

The Canadian Wheat Lands Limited was organized in England in 1911. It was the child of the Southern Alberta Land Company and had an option on 64,000 acres of the parent's land. Two-thirds of the land was to be irrigable and water was to be delivered not later than 1914. The company broke 12,000 acres of land in 1911 and 13,000 acres the next year. But the plans went astray. A traveller between Medicine Hat and Vauxhall today may see many miles of the large irrigation ditches dug at that time and which never carried water.

The most ardent individual advocate of irrigation in the early years was William Pearce, promoter of "The William Pearce Scheme" to take water from the North Saskatchewan River to serve a large area in both Alberta and Saskatchewan. He made his proposal in 1898 and advocated the monster plan for the next twenty years. He believed that enough water could be stored in Sullivan Lake and mountain reservoirs to irrigate a million acres in Saskatchewan and half as much in Alberta. Surveys were made, although engineering and financial difficulties stood in the path of development. But the William

Pearce Scheme has justified re-examination and the nation may hear more about it or a modification thereof.

Not all settlers were so far-sighted as those just mentioned. Many of the land seekers who hastened to Western Canada to convert virgin prairie to grain fields gave little thought to suitability of soil or the particular cultural methods which would be appropriate. Many mistakes were made and a big land utilization job remained to be done. The need was for something more than irrigation.

The solution did not seem to lie with professional rain-makers, greatly as their claims appealed to flamboyant western imaginations. Early in 1921, for example, Charlie Hatfield signed a contract with Medicine Hat farmers organized under the United Agricultural Association to make it rain over a radius of one hundred miles. It was agreed that he could claim credit for half the rain falling between May 1 and August 1, and collect up to \$8,000 for a maximum of four inches. For rain beyond that amount no charge would be made. Hatfield's towers were set up, his chemicals carefully mixed, and farmers came to town to buy raincoats. A few days after the equipment was set up rain began to fall, and rain continued until farmers began to ask that Hatfield "shut off" the moisture. For a time Hatfield was the best known name in the West, but unfortunately for his reputation, other districts in southern Alberta got more rain than Medicine Hat late in June, and the farmers grew suspicious. But Hatfield collected his payments, agreed to return the next year, departed, and did not come back.

In 1926 Alberta appointed a commission to study that section of the province known as Tilley East Area. The Special Areas Act which followed the report indicated Alberta's determination to cope with its land utilization problem in the drought area. Of the act, O. S. Longman said in 1939, in an article in *Scientific Agriculture*, that it was designed to

mend in a measure the mistakes of a land settlement policy which had placed thousands of settlers upon lands which were capable of sustaining only a small fraction of their number—the great tragedy of Western Canada.

A large section of southeastern Alberta, where soil and climatic limitations prevented successful grain growing, was brought under the act. Land was removed from private control; some of it was re-grassed; and an agriculture quite different from that originally attempted was practised with reasonably good results.

On the prairie, however, and particularly in Palliser's Triangle, that pentagonal area covering southeastern Alberta and southwestern Saskatchewan, many farms were still without irrigation in the twenties and were operating on an unplanned basis with wheat to all intents and purposes their only crop. These were the first areas to be hit in the thirties by what some historians call a decade of drought. Middle-aged Westerners, however, will hardly recall a time when these areas did not have cause for complaint. One such tells of teaching for the first time, a young Easterner, in a village on the Empress line near Swift Current in 1922. The water for washing as well as drinking had to be bought, and was meted out in what seemed teacupfuls. A drive in the country would periodically pass abandoned farms which local people explained casually "Oh that's where the So-and-So's lived. They were having a bad time so they just loaded everything up one night and drove south—probably on their way to the United States. No, they didn't lose anything; the place was mortgaged for more than it was worth." A government train with pictures and information on shelter belts, irrigation, pasture rehabilitation, and diversification was received with apathy, and the school taxes were so far in arrears that the teacher had to borrow money from her landlord, an implement dealer, to get home.

In the early days at least, there was a tendency to laugh off these disasters with a sort of hardy heartiness. In a drought-stricken area near Medicine Hat about 1911, a brave soul who had ventured farther than was wise with an automobile of that period, discovered that the car radiator had boiled dry. He walked a mile to a farmhouse in the hope of getting water. Nobody was about. But tacked on the door of the house was a piece of paper with this verse:

Fifty miles to water
One hundred miles to wood
To Hell with California
We're staying here for good.
P.S. We've gone fishing.

In one of the early years a settler from Shaunavon reported that things were so dry down his way that he had to soak his family pig for two days before it would hold slop. From Bantry, Alberta, came word that the grazing was so short, the gophers were obliged to "get down on their knees in order to eat grass," and from other parts in one of those periods came reports of mature frogs which had never learned to swim. Years later, in the memorable season of 1937, a farmer at Climax writing to his relief officer for some repairs for his implements, added "and three barrels of water to start my dam." In depression days a new Canadian reported that the May winds had blown away everything he owned, except the mortgage. Another homesteader, at the end of a bad day, wrote words for a song which he called "Oh Where is My Drifting Soil Tonight?" It took a good man to see anything funny in a dust storm, but one farmer when telling how thick the dust was in a storm at Tomkins, said "Imagine my surprise when I looked up and saw a gopher digging a hole just above my head."

These courageous souls lost their crops and their properties, but not their resourcefulness, their sense of humour, or their objectivity. Westerners all over Canada were proud when in one of the worst years of the depression a family group from Marshall, Saskatchewan, won high honours at the Dominion Drama Festival. Their play, written and acted by themselves, dealt powerfully with local conditions at the period. It was characteristic of a country where the spread of settlement and the scarcity of large cities had always thrown a people of considerable initiative pretty well on their own social and cultural resources.

What made the thirties so fatal to the prairies was the fact that a period of poorer than average crops coincided with a period of world-wide depression and deflation during which

the bottom dropped out of all markets. Circumstances had led the prairie farmer to operate on an extensive rather than an intensive basis, the large area farmed making up for the small profit per acre. Under this system a very slight fall in yields or in prices can change the farmer's position from profit to loss. Furthermore, the prairie wheat grower, in many instances, was a commercial rather than a subsistence farmer, unable to live off his property much more adequately than the owner of a city block; nearly everything he used came from the retail store and the mail order catalogue. The beginning of the depression found many farmers still loaded with debts for land and machinery, some of them incurred at the record prices of the late twenties, which had to be met from the slim takings of the thirties in a greatly devalued currency.

The drought and hardship of the thirties are too recent to be forgotten. In the never-to-be-forgotten year of 1937, crop yields reached the lowest point in prairie history. The Saskatchewan wheat average was two and one-half bushels per seeded acre. It was a grim situation to face, especially since drought had coincided with economic depression. Editorial writers were as gloomy as the farmers. Here are editorial samples:

Drought and dust storms are becoming more prevalent each year and the drought is working its way northward. . . . The whole country is likely to become a desert.

The reason it does not rain any more in the drought area is because the trees have been cut. Unless large groups of trees and numerous hedges are planted, normal rains will never occur again.

The Golden West of Song and Story has disappeared and in its place is a dust-ridden flat, a considerable portion of which is fast becoming a desert.

Normal rains will probably never occur again, and then if they should, the rains will not grow average crops. The future for rainfall over Western Canada is bleak indeed.

These jeremiads might have been justified under similar conditions at an earlier period of the world's history, before democratic over-all planning had become a possibility. Besides, the situation was not so permanently serious as they thought.

The change was not so great; it was not a shift comparable to that which left hairy mammoths embedded in Arctic ice. It was not part of a world-wide trend observable generally over a long period. Agriculture in the Canadian wheat belt is carried on very close to the minimum conditions required for success, with a narrow margin of safety. Since the average precipitation is barely sufficient to carry on orthodox agriculture at a profit, a comparatively slight drop below average can be disastrous. The average annual precipitation at Medicine Hat from 1929 to 1934 was 12.2 inches, only one inch less than the average over a 51-year period, yet the drop was enough to make the difference between a possibility of success and a certainty of failure. As Professor Currie points out, it is "axiomatic in climatology that the lower the average rainfall the greater its variability from year to year," and the fact that several bad years might succeed each other was a possibility against which people had to be prepared even as Joseph in Egypt. The fact that this period coincided with a period of low prices made it more depressing but did not in any way suggest that it need be more permanent.

In the second place some of the worst effects of the trouble, such as soil drifting and dust storms, were caused by man's own mismanagement, and this could be corrected. Both scientists and practical farmers spent a good deal of thought on means by which these mistakes could be rectified, and some of their findings and efforts may well exert a profound effect on the whole future of prairie agriculture.

One of the worst features of the old wheat economy was its threat to the soil. Soil is a national heritage, and conservation should be fundamental to all policies. There is no greater service to the nation than conservation of its soil, the source of its bread. The next generation, like the present, must derive its food from the same soil, and to permit deterioration of so great a national asset must be the equivalent of treason.

True enough, serious mistakes occurred and there was some deterioration in western soils. Years of low prices accounted for

a measure of soil robbery because of the necessity of producing by cheapest means. The actual disappearance of nitrogen, potash, and phosphorus from the huge prairie reserves, however, was not nearly as great as many writers have suggested. The biggest soil loss was caused by the wind erosion that accompanied the destruction of soil fibre.

It seems that more interest in grass would be good for wheat, for soil, and for diversification. World history shows that permanent soil conservation has never been achieved without grass. An enduring agriculture is marked by interdependence between soil, wheat, and other grains, forage crops and livestock.

Hand in hand with drought went dry sloughs, feed shortages, and drifting soil. Erosion by wind and water has been one of the most serious problems confronting North American agriculture. Of the two types of erosion, drifting soil was the more serious in the Canadian West. A pioneer (George W. Phenix) recalled dust storms south of Brandon in 1889, but certainly the problem of erosion, especially on wheat land, increased with passing years.

Reseeding of wind-lashed and abandoned land was not a simple matter and the majority of domestic grasses were unable to establish themselves. Crested wheat grass filled a need. This native of Russia and Western Siberia was introduced to this continent by the United States Department of Agriculture in 1898. Later it was brought to Western Canada by the University of Saskatchewan and in time proved a great aid in rehabilitation.

Strip farming, an invention of the wind-whipped wheat country, helped to check soil losses. It consisted of a two-year rotation, summerfallow and grain, with both phases represented in alternate strips in the same field. The strips were ten to twenty rods in width, usually running north and south.

Strip farming began rather by accident, near Monarch and Nobleford in Alberta. A group of Dutch farmers found that they could halt the devastation of drifting soil without aban-

doning summerfallow as a means of controlling weeds and conserving moisture. In 1932 a group of farmers from Rosetown inspected this strip farming and returned with determination to use it. At Shaunavon, Limerick, Gull Lake, and Aneroid, Strip Farming Associations were formed.

However, these thinking farmers of the thirties did not content themselves with improvements in individual methods. They asked themselves whether there were not whole areas in which the scales were weighted too heavily against the grain farmer, and from which, in his own interests and those of the whole community, he should be evacuated. The answer was yes.

Professor Currie suggests that the financial losses to individuals, as well as to the governments which had to give relief and eventually to bear the cost of rehabilitating the farmers elsewhere, could have been avoided by soil surveys. There is a good deal of truth in this, for soil analysis not only shows present quality but indicates the cycle of climatic conditions by which that quality was built up. Soil surveys are now a recognized prerequisite for developing policies of settlement and rehabilitation.

At first this might seem to be locking the stable door after the horse is stolen, but it is more practical than it appears. The progressive abandonment of farms in the dry belt, particularly in certain parts of Palliser's Triangle, had a cumulative effect. Total taxes for public services such as roads and schools were borne by a decreasing number of taxpayers with increasing difficulty, which led to more abandonment. To arrest this trend before the country became really desert, government action was necessary. The first step was to determine whether the land was really suited to cultivation or whether it should be re-established for grazing purposes as in the days of the buffalo.

Careful analysis in the driest area showed that on occasional farms with better soil or slightly better moisture conditions grain farming was possible, though risky. The Prairie Farm Rehabilitation Act, passed by the federal govern-

ment in 1935, provided for the establishment of community pastures and resettlement of farms on the better soils where crop production would offer better security. On lands taken for community pastures, grass was allowed to regenerate naturally, but pastures were reseeded when necessary. These were designed for co-operative use by farmers living on the better lands adjacent to the pastures.

This was by no means a new idea. The National Live Stock Association meeting at Ottawa in 1908 had heard a proposal about community pastures from Robert Sinton of Regina. Said Mr. Sinton, "The cattle could be collected in the summer months. A small charge could be collected to bear the expense. I do not think it would have to be a large charge. The way I had it figured out, I think about a dollar a head for the season would meet it. At the close of the summer months they could be returned to the farms where they could be fed on straw and refuse grains." At that time, however, people were not conscious of the need. The depression forced a reassessment of the situation.

Sixteen community pastures, ranging from 6,000 to 25,000 acres, were established in the drier areas of Saskatchewan in 1937. Ten years later a total of 75 pastures were in active operation in Saskatchewan and Manitoba, comprising 1,412,860 acres and supporting 67,900 cattle and horses and 2,966 sheep.

Water development was an important phase of P.F.R.A. It involved the development of irrigation projects, large and small, dugouts and stock-watering dams. By March 31, 1947, work was completed or well advanced on 108 large projects, which would develop or restore irrigation on 202,000 acres at a cost in excess of \$4,000,000. One of these was the Val Marie project in Saskatchewan, which harvested its first irrigated crop in 1937 when the land for miles around it failed to produce a harvest.

Among the smaller projects for which assistance was provided to that date were 27,916 water storage dugouts, which, like the community pastures, were an old device, now for the

first time achieving general recognition. The first farm dugout for the purpose of furnishing water for the stock and farmhouse of which there is record, was planned and excavated by Henry Checker, a settler in the Moose Jaw district in 1883. The water was said to be good for the stock and "better than slough water for the house." The P.F.R.A. also aided 4,633 stock-watering dams and 1,069 irrigation projects. Financial aid on these "smaller projects" amounted to over \$3,000,000. Included among P.F.R.A. expenses, too, were sums for soil surveys, soil research, tree planting, re-grassing, and relocation of farmers moved from community pastures.

The apostles of diversification who had had difficulty in making themselves heard when wheat markets were good, raised their voices with renewed vigour when those markets failed. Vegetables can be grown anywhere on the prairies if enough care is taken to provide windbreaks and use irrigation where possible, or at least summerfallowing. Even fruit in some form can be grown by every western farmer. The breeding of drought-tolerant and hardy varieties has received attention. In passing it may be noted that a couple of those varieties, the Rescue crab and Heyer 12, which have been acclaimed on the prairies, would not have survived except for the imagination and judgment of John Lloyd of Adanac. The Heyer 12 came from a seedling which was among the stock marked for discard at Rosthern Experimental Station and salvaged by Lloyd in 1932. Rescue came from some broken branches which John Lloyd gathered up at the Scott Experimental Station in 1933 after boys had broken into the orchard and ruined one of the experimental trees. How far the commercial production of fruits and vegetables will go may be in doubt, but certainly their inclusion in the agricultural programme can be a valuable form of subsistence insurance.

Dairying is considered practical in all districts where feed crops can be grown with reasonable certainty. The advance of this branch of agriculture has been indicated in a previous chapter, but here too the possibilities of expansion are great,

except in districts where it may be difficult to provide summer pasture and good winter fodder.

The farming country of the midwest is big and varied and no single formula will be satisfactory for all districts. Diversification in one form or another is generally practicable, but in some sections it is not the answer, except in so far as it can be carried on as a supplement to the main activity. Over a large area, grain will continue to be the main source of income. A basic problem of the prairies and one that requires the most unremitting attention both of experimental scientists and of practising farmers, is that of combatting the factors which render grain farming uncertain for both the individual and the community.

Work on new strains of wheat continued through the thirties and went on into the more prosperous forties. Something has been said of the search for a rust-resistant wheat. In this race Minnesota won the first heat when Dr. H. K. Hayes announced the rust-resistant Thatcher in 1933 and distributed 2,000 bushels to farmers of the state. This variety was a selection from Double Cross, but Canadians had a particular interest in its pedigree because Marquis was a double grandparent. Thatcher found its way across the border and into Manitoba fields in 1936.

In the meantime, the efforts of Canadian workers were meeting with success. In 1935, two new varieties were announced. Renown, from the Dominion Rust Research Laboratory, was the product of a cross between Reward and the South Dakota child of Marquis, called H-44. Apex, originating at the University of Saskatchewan, sprang from Marquis on one side and a cross between H-44 and Double Cross on the other. Then in 1939, the Dominion Rust Laboratory added another, Regent, which had the same parent strains as Renown. Nor did progress end there. In 1946, the Rust Laboratory scored again with Redman whose parents were Regent and Canus. And still it could be said that all traced to Marquis.

The old rust enemy was being beaten back but wheat was

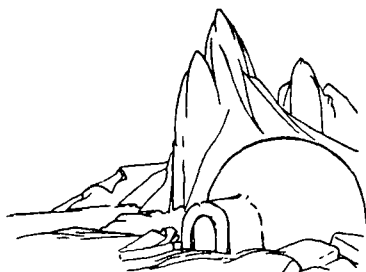
still threatened by other wicked destroyers like new strains of rust and the saw-fly. That insect had attracted attention around Souris as early as 1895 and moved westward into the big wheat fields. Damage went to twenty million dollars annually and in 1943 approximately one-quarter of Saskatchewan's wheat crop was lost.

About 1926, H. J. Kemp, of Swift Current Experimental Station, made up his mind that a variety of wheat which would withstand the attack of the saw-fly could be produced. Eleven years later Arnold Platt became the spearhead and after a thorough search among wheat hybrids, a strain from Apex and New Zealand 615 was fixed upon as the one best suited to stand off both rust and the saw-fly and, at the same time, yield as well as Thatcher. The variety which emerged was called Rescue; it was formally introduced to western farms in 1946. Unfortunately, it was not as good as Marquis in milling, but it was an advance in the battle against the enemies of the grain farmer and opened a new chapter in the remarkable story of wheat. The search continued and in 1952, a new wheat variety, Chinook, resistant to saw-fly and superior to Rescue in milling qualities, was announced. Like Rescue, the new Chinook was a contribution from workers on Canada's Experimental Farms.

The more buoyant economic conditions that accompanied World War II were reflected in better wheat prices, and diversification was stimulated by the demand for foods of animal origin. With increasing precipitation, crops were better also.

Western optimists are often justified, however, even the most seemingly credulous. In 1940, and again in 1941 and 1942, Canadian wheat production was above 500,000,000 bushels. Five years after 1937, that year of drought and ruin, the wheat crop was the biggest in Canada's history, 556,684,000 bushels, and eight years after, the Province of Saskatchewan made the biggest farmer income tax payments to the Dominion treasury. And the Saskatchewan farm debt, which stood at \$468,000,000 at the end of 1937, was less than a sixth of that figure in 1948.

17 *Today and Tomorrow*



THE onset of World War II coincided with the end of a decade of poor prices and widespread drought in Western Canada. Drought and depression had made an unmerciful combination and 1939 found prairie farmers in a state of frustration and near bankruptcy. The season of two years before, with its extremes of drought and soil drifting, had left a sense of defeat and there had been many who said, "The West will never come back."

But the war years that followed 1939 witnessed a demonstration of the resilience and adaptability of Western Canada's agriculture. Prairie rainfall was reasonably adequate; the biggest wheat crop in the history of the country was harvested in 1942. The farm price level in 1945 was 92.3 per cent higher than in 1939. Mortgages were paid: modern cars replaced the "Bennett Buggies," as the farmers called their horse-drawn motor-cars in a natural tendency to blame their troubles on the prime minister, particularly since he had been a strong supporter of tariffs which kept up the cost of machinery and motor cars but not of wheat. In short, the West bloomed again.

Wartime needs in foods set an entirely different pattern in agricultural production, and the notable development of the

period was expansion in the output of livestock and livestock products, especially pigs, beef, dairy products, poultry, and eggs. There was wheat to spare, but Britain and her fighting allies wanted more meat and other foods of animal origin. Expansion occurred in all sections of Canada but the most notable results were seen in Alberta, Saskatchewan, and Manitoba.

Diversification, which had been progressing slowly, was stimulated and accelerated. Wheat acreage was reduced and pig production soared to unprecedented levels. "Bacon for Britain" was the slogan of the day, and pigs advanced their social rank until they constituted the most fashionable topic for conversation across the best china teapots. Doctors, ministers, lawyers, and hairdressers had pigs in their back yards or sows on shares, and parishioners who were not at church Sunday morning gave the excuse that they had to drive to the country to check on farrowing. The high point in pig production was in 1944 when the Canadian export of bacon to Britain was 692,310,300 pounds, equal to about 5,769,352 pigs. In the six years from 1940 to 1945, no less than three and one-half billion pounds of meat went from Canada to Britain, and most of it was bacon. That amount of meat if converted back to pigs would make enough live porkers to extend in a straight head-to-tail column completely around the world. One more pig would have made a kink in the line. Most of the surplus for export came from Western Canada, where, seventy years before, no abattoirs, creameries, or cheese factories existed, where the few cattle west of Red River showed the type and breeding of Texas Longhorns, and pigs and sheep were almost rare enough to be museum pieces.

Western Canada's capacity to produce foods other than wheat attracted the attention of all the world. Thoughtful people saw the area becoming a world food basket, not just a bread basket. And students reminded themselves that a high standard of human nutrition and a well-balanced farming programme go hand in hand.

By the forties Westerners had demonstrated that they could breed Thoroughbreds with figures like chorus girls, bullocks

built like beer barrels, draughts with floating power, double-purpose sheep, super-stretched pigs, and four-cylinder milk-makers.

At war's end, Europe's hunger was acute and wheat from Canada's huge stockpile moved at increasing rates into export channels. Livestock production dropped. It had been the experience of the West on other occasions that interest in livestock declined as wheat markets strengthened, and vice versa.

The first need in war-ravished countries was for energy foods and Canada's accumulated wheat with its hundred thousand Calories per bushel, was a logical source of the needed energy. The stock-piled millions of bushels that represented a national burden during the war years proved to be an international blessing in the years that followed.

The United Kingdom, long Canada's best customer for farm products, chose to buy its wartime foods on a contract basis. At war's end, Britain sought further large volumes of wheat, bacon, cheese, and eggs, and food contracts were written annually until the end of 1949. The highly controversial Canada-United Kingdom Wheat Agreement was a postwar effort to buy a measure of security for both producers and consumers. By its terms Canada was to furnish 600,000,000 bushels during the life of the contract, August 1, 1946 to July 31, 1950. In each of the first two crop years, Canada sold 160,000,000 bushels at \$1.55 per bushel and in each of the last two years, the delivery was 140,000,000 bushels and the price \$2.00 per bushel.

Following the conclusion of the United Kingdom Wheat Agreement in 1950, wheat sales to the United Kingdom were made within the terms of the 1949 International Wheat Agreement. Until the freeing of the Canadian dollar on October 2, 1950, the maximum price for Canadian wheat, under the International Agreement, was \$1.98 a bushel; thereafter, it fluctuated with the rate of exchange.

Dollar exchange problems became serious in United Kingdom economy in the summer of 1947. Consequently, Canadian exports to that country declined sharply in 1948 and the United

Kingdom was much less interested in renewing food contracts after 1949. The International Wheat Agreement furnished hope for some security for western wheat growers but they had the stark reminder that such agreements at the international level had failed before.

Wheat agreements may succeed or fail and wheat marketing may be fraught with uncertainty, but western wheat will have no superior in quality and no nation is likely to produce it with more efficiency and economy. It is a reasonable guess that the expanding human family will want and need the wheat from Canada's broad prairies.

Wheat continues to be Western Canada's leading crop, both in acreage and value. It is the crop that wins newspaper headlines most often and is, with the weather and the latest oil discoveries, a chief topic for street corner or cross-roads conversation. When Manitoba, Saskatchewan, and Alberta production goes up to 425,000,000 bushels, as in 1950, railroaders, bankers, manufacturers, and machine agents take notice. And if, as was the case in that mid-century year 200,000,000 bushels of the crop are damaged by frost, the loss is felt by Canadian business, east and west.

But man cannot live by wheat alone. Well-balanced nutrition cannot be obtained that way. And neither good farm management nor proper soil welfare can be achieved with wheat as the sole crop. A certain relationship between soil, cash crops, feed crops, and livestock is an obvious essential if agriculture is to fulfil its purpose.

Other crops have become increasingly important in Western Canada's agriculture: coarse grains, hay and pasture, flax, sugar beets, sunflowers, peas, potatoes, and so on. And milk production in the three mid-western provinces advanced from 22 per cent of the Canadian total to 27 per cent in the most recent twenty-year period. But having regard to human nutrition, soil conservation, and efficient farm practices, it would seem that Canada's recent livestock population, east and west, is too low. Cattle production has not shown pronounced declines, but the numbers of those food producers have not kept pace with

human population. In 1901, Canada had 1,038 cattle per 1,000 of human population and fifty years later, 650 cattle per 1,000 humans. It was a decline to 63 per cent in relation to the people to be fed and supported in the nation. Considering cattle, sheep, and pigs together, on the basis of three pigs equal to one cattle-unit, and five sheep to equal one cattle-unit, the 1901 figures showed 1,277 cattle-units per 1,000 of human population while the mid-century count was 805 cattle-units per 1,000 of human population.

Canadian farms, east and west, must guard against lack of balance. Livestock is as important as ever because without it good nutrition, good farming, and good soil cannot be achieved.

As the United Kingdom market for Canadian farm surplus declined, the potentialities of the United States market for food products, cattle and beef in particular, became more evident. Restrictions against the export of cattle to the United States were lifted in 1948, and heavy movements began. In 1949, live cattle and calves exported to the United States totalled 420,655 head, in addition to 101,219,200 pounds of dressed beef. As a result of the good market, beef prices reached unprecedented peaks in 1950 and 1951. Fat cattle sold on the Winnipeg market in June of 1951 at up to thirty-seven cents per pound and cattlemen had the new experience of selling thousand-pound steers for as much as \$350 each, and discard cows for well over \$300. Heavy old bulls, destined for bologna, netted as much as \$500 each. That side of agriculture had taken a strange turn. Eighteen years before, old cows were sold for as little as \$10 each.

In years past, the United States market for Canadian cattle had been uncertain and unpredictable, but with a human population of over 150 millions, increasing by two millions each year, it seemed certain that food production at present levels of intake could not keep pace. The United States must import cattle and perhaps some other agricultural products, or face the necessity of reducing the standard of diet, in which 59 per cent of the food Calories come from vegetable products and 41 per cent from animal products. It will be increasingly difficult to

maintain such food standards without importing. Most of Canada's surplus in beef cattle will come from the West.

No industry escapes reverses and livestock can be vulnerable to feed shortage, a severe winter, a market failure, or outbreak of disease. When foot-and-mouth disease was discovered in the Regina district and announced on February 25, 1952, stockmen gasped. It was Canada's first such outbreak and it struck at a period of maximum buoyancy in cattle. But public policy was firmly behind eradication by slaughter, disposal of the livestock victims by deep burial, and compensation to the owners, and the clean-up went forward with determination and vigour.

Taking the long view, mounting human population in Canada, the United States, and other lands, presents an unusual challenge to an area that is basically agricultural, and promises a need for all the farm products that can be grown. There are more people to be fed, and a higher standard of nutrition is a universal dream.

Canada's fourteen million citizens represent the best market for the products of agriculture, and even in the war years, when production was at a peak, the domestic market took more than 75 per cent of what the farmers grew. Canada's population will grow, just as other North American and world populations will mount steadily. What Canadians will do about a standard of diet when purchasing power is favourable is indicated by the per capita meat consumption in 1939 and 1949. In the former year it was 114.6 pounds; in the latter it was 138.6.

Keeping in mind soil losses from erosion and depletion, it may be expected that population will increase faster than food production in this and other lands. World food production in 1949 was just 1 per cent greater than in 1939, but world population had increased by 8 per cent. It is inevitable that food shortages will be aggravated. Two thirds of the world's people subsist almost entirely on vegetarian diets and one-third receive less than 2,000 Calories per day, compared to the Canadian average of 3,000.

Less than one-tenth of the world's land area is suitable for cultivation. For the world's population, advancing to two and one-half billions, the land devoted to cultivated crops and pastures would furnish about two acres per person if it could be distributed. Two acres will yield more rice or potatoes or wheat than one person can eat in a year but two acres will not produce rations such as Canadians and other western peoples enjoy and demand. There can be no doubt that if good foods were permitted to move freely to meet demands created by hungry people, unsalable surpluses of products in the great Canadian stretches of farming country would be impossible.

Diversification of industry, like diversification of agriculture, is a worthy objective. In this the West has witnessed dramatic change. Unsuspected wealth has been discovered in oil, gold, uranium, lead, inland fish, water power, wood pulp, and salt. New oil fields discovered during the war include Vermilion in 1939, East Taber in 1942, West Taber in 1944, Conrad in 1944, North Princess in 1944, South Princess in 1946, Lloydminster (with renewed activity in 1943 leading to intensive development in 1944 and thereafter), Leduc in 1947 with the Woodbend extension in 1948, Pincher Creek and Armena and Redwater in 1948. Production of petroleum in Alberta approximated 20,000 barrels a day in 1947, and probable reserves estimated at more than 500 million barrels are now considered to be much greater. And, an interesting contrast, at Jumping-pound where less than a century ago the Indians, as the name indicates, found exceptionally fine buffalo hunting, a very important gas-distillate field was opened in 1944. The fisheries productions of the midwestern provinces, which had been negligible at the time of World War I, had increased in the ratio of 5 to 17 or 18 by 1945. In 1946 for the three provinces and the Northwest Territories the value of the fisheries was 6.5 per cent of the total Canadian production and equal to the total production of the province of Quebec with its much more obvious water resources. It is an interesting carry-over from fur-trading days that the three prairie provinces still provide

over half the total number of pelts taken in the Dominion, and over one-third of the total value. Alberta still leads all provinces in coal production.

It will come as a surprise to many who have not followed developments that the annual value of Manitoba's industrial production, \$525,000,000 in 1950, exceeds that of her agricultural production. Admittedly, much of this consists of processing the products of agriculture; but at any rate the \$90,000,000 paid in wages by Manitoba industry in 1950 assured a good local market for farm goods. Farms and factories should be considered as partners in a nation's economy.

It is clear that farming units have become bigger and farm operators fewer. At the time of Confederation, 75 per cent of the Canadian population lived on farms, but when the 1941 census was taken, farming residents were only 27.4 per cent of the total. There is no reason to believe that the trend has been checked. Bigger farms and higher efficiency through mechanization made it possible to reduce the number of workers. In 1820, according to United States estimates, it required 320 man-hours of work to produce 100 bushels of wheat, but by 1900 the necessary man-hours were reduced to 108, and by 1949 to 34.

The total number of Saskatchewan farms dropped by 10 per cent in the five-year period from 1941 to 1946, while the average size of farms increased by a corresponding percentage. The change in Manitoba and Alberta was roughly the same. A certain amount of sociological wailing was heard about the diminishing farm population but there was no reason to suppose the urban-farm groups were not reasonably in balance. And moreover, it is more important that farm people have good homes and good living than that a big population be in residence on the land.

Mechanization was the principal factor back of that falling rural population. Indeed, the application of mechanics has accounted for numerous changes in farm practices. It is a dramatic story, touching farm power, seeding and tillage

machinery, harvesting machinery, and the labour-saving devices that go with farm electrification.

The first threat to the supremacy of the lowly oxen and the not so lowly horses that broke and cultivated the homesteader's prairie fields was the lumbering steam engine. Next came the heavy gasoline tractors that scorned the need for a tankman to haul water and a stoker to push straw or wood into the gluttonous fire-box. Ultimately the trend was to lighter and more efficient types and the farm model which emerged was streamlined, manoeuvrable, mounted on pneumatic tires, equipped with hydraulic controls, and fast enough to break the local speed limits when travelling on the highway. It bore only a slight resemblance to its mechanical ancestors of just thirty or forty years earlier.

Gradually that versatile tractor unit displaced Canada's farm horses, until the 1,700,000 head at June 1, 1950, represented less than half of the horse population of 1921. The displacement of farm horses was higher and occurred faster in the West than in the East.

Between 1940 and 1950, farm tractors doubled in number, and in the latter year there were 55 tractors per 100 farms in Canada, 85 per 100 farms in the three midwestern provinces, and 100 per 100 farms in the wheat province of Saskatchewan where conditions most favour their use. There is no prospect of any recession from that degree of mechanization.

To do the work on a one-section grain farm a short generation ago required a barn full of horses and a crew of helpers that resembled a baseball team. Today a man with modern equipment can do the field work on a section, unassisted except at the harvest season.

The amount of land coming under irrigation was increased. Alberta and Saskatchewan in 1946 had 717,020 acres under irrigation. Of this, 581,520 acres were served by a few large organizations while the remaining acreage embraced 1,568 individual projects of small size.

With an ever-growing interest in what irrigation on Palliser's

dry triangle could mean to Canadian economy, work went forward in 1947 on the big St. Mary and Milk River Project in Southern Alberta. It was completed in 1951. Plans were drawn for large-scale development on the South Saskatchewan with a huge dam near Elbow. The latter would be expected to send its water to freshen and invigorate close to half a million acres. It is thought that a total of at least three million acres in Alberta and Saskatchewan can be irrigated ultimately with reasonable economy.

Northward movements have also pushed back the frontier. Defence problems have necessitated improved communications. The Hudson Bay Railway has been supplemented by the Alaska Highway of 1,500 miles, built by American army engineers in record time (nine months) in 1942, and air routes touch almost every northern community.

Certainly, climate is a factor in agriculture, and the climate of the north country is different. Summers are short, winters are long, and winter cold may be severe. A North American record was made at the airport at Snag in the Yukon when temperature dropped to 81° below zero in February 1947. All present agreed that it was cold, and no neighbouring Chamber of Commerce sought to break Snag's record. At Dawson, the mean temperature for January is about -22°F. and for July, 59°F. The corresponding temperatures for Winnipeg are -4°F. and 66°F.

But people who live in these northern regions do not squander valuable time in talking about the weather; they will tell the weather-conscious visitor that anyone living in either Panama or the Arctic who doesn't know enough to dress properly for the climate deserves to be uncomfortable. When I asked a prospector at Hay River about the low point "in last winter's temperatures," he replied casually, "Either 37 or 57 below; I can't remember which, but it doesn't matter because it was a nice winter anyway." And when I stood on the shore of the Arctic in the month of June and tried to make conversation with an Eskimo by saying, "You have a nice summer," he replied with an earnest smile, "Nice winter too."

It does not follow that climate becomes progressively colder as one travels north. The cold centre seems to be in the Yukon, and beyond that, towards the Arctic coast, winter is more moderate. Stefansson stated repeatedly that he had found winter's cold and storms to be more severe in North Dakota than on the Arctic coast.

More crucial to agricultural development than winter cold are length of growing season, rainfall, and soil. Contrary to popular opinion, both winter snow and summer rains are light over most of the north. Total yearly precipitation at Fort Smith on the northern boundary of the Province of Alberta, Fort Simpson, deeper in the Northwest Territories, Dawson in the Yukon, and Chesterfield Inlet on Hudson's Bay, would average between twelve and thirteen inches, no more than the precipitation in the driest sections of the plains. At Whitehorse in the Yukon and Aklavik, close to the Arctic Ocean, rain and snow total slightly less, ten to eleven inches per year. While rainfall is light, evaporation is also lower than in the settled parts of Canada and thus the precipitation requirement for plant growth is comparatively low.

The northern growing season is short but long days bring compensation for short summer seasons, and only those who have seen it can comprehend the rapid rate of plant growth. Aklavik, well within the Arctic Circle, has a ringside seat for the June spectacle of the Midnight Sun, and as far south as Yellowknife the "teeing off" to open officially and formally a new golf course in 1948 was at the hour of midnight, on June 20. "Daylight saving" means nothing in that part of Canada and June baseball games never end prematurely on account of darkness. It means, too, that wheat which requires 100 days to mature at Regina would be ready for harvest in 85 days at Dawson.

Chesterfield Inlet expects 67 consecutive frost-free days, Fort Resolution, beside Great Slave Lake, about 92, Dawson about 80, Aklavik 65; and Norman Wells has seen over 100 days (115 in 1946). Having regard to the north's effectiveness in accelerating plant maturity, it is clear that 80 consecutive frost-

free days at Norman Wells will ensure the production of a wide and valuable range of vegetable foods.

If one were to travel to the mouth of the Mackenzie River in the month of June, it would be abundantly clear that flowers bloom and mosquitoes thrive there as elsewhere; and at the most northerly point on the route, Bruno Weidman's garden and plots of oats would bear a striking testimony. Indeed anyone along that 1,600-mile river life-line who makes reasonable effort can have a good garden and grow a wide variety of food plants.

Farming to meet local needs was stimulated by the Klondike gold rush of 1898, but it slumped. In 1941, the total farm land in the Yukon was only 2,781 acres, contained in 26 farms. The actual area in crop was 511 acres, planted to grass, cereals, alfalfa, and potatoes.

Experimental work on a co-operative basis was started by the Canadian Department of Agriculture in 1915, and an experimental sub-station was operated six miles west of Dawson from 1917 until 1925. Good crops of cereals were matured in most years although early frost reduced the grain crops to forage on a few occasions.

In 1943, the experimental programme was revived and a broad reconnaissance survey of soils along the Alaska Highway and in the Yukon River basin was undertaken by the Experimental Farms Service. In the following year a site for an experimental sub-station was selected beside the highway about a hundred miles west of Whitehorse. The station was in the Takhihi-Dezadeash Valley where something over 100,000 acres of agricultural land were calling for attention. Another 60,000 acres or more along the Yukon River are expected to be suitable for farming, and a larger area in the south of Yukon Territory may one day be employed for grazing.

The Northwest Territories had an estimated 1,000 acres in cultivation in 1944, and at the midyear in the century any expansion beyond that figure was negligible. But it was becoming increasingly clear that where there is acceptable soil, useful

crops can be grown. Gardens have been most successful at Yellowknife where a mushrooming population requires larger volumes of fresh foods. The Yellowknife pioneers with seeds were C. C. Bevan, who in the summer of 1948 had five acres growing vegetables, C. O. Callaghen with twelve acres, and Martin Bode with two acres. It was not easy to bring their land under cultivation, and the frost line was only a foot below surface in mid-June when the first locally grown vegetables were coming on the market. Dawson has done well with gardens, and is noted especially for its potatoes and tomatoes. At Fort Simpson, where there is an 85-acre experimental sub-station, a church mission farm, and a few well-established growers of potatoes and vegetables, planting is done with confidence.

Some demonstration work of special interest is being done by the Imperial Oil Company on its plant property at Norman Wells, some fifty miles south of the Arctic Circle. There the soil is black and wet and high in organic matter. It requires drainage and perhaps some artificial fertilizer to compensate for certain deficiencies. But from less than an acre planted at Norman Wells in 1948, a total of 7,479½ pounds of vegetables were recovered—there where fresh foods are needed so urgently. The vegetables harvested were broad beans, tomatoes, beets, rhubarb, cucumbers, peas, string beans, spinach, parsley, turnips, radishes, Swiss chard, carrots, cabbage, cauliflower, celery, cress, head lettuce, leaf lettuce, green onions, Spanish onions, and potatoes. (I have a photograph to prove it.) The only garden crop that failed was broccoli, and the explanation offered was intended to indicate the phenomenal rate of growth at the Norman Wells latitude. When the gardener examined the broccoli on a Saturday afternoon, as the story was told, he considered it too immature for use, but when he returned on Monday morning, it had gone to seed and had to be discarded.

The Norman Wells record for 1949 was even more impressive. With the application of some 9-27-9 fertilizer and just a little larger plot for the horticultural plantings, six tons of vegetables were obtained.

On May 29 of the same year, the Norman Wells people planted experimental plots of Saunders wheat, Ajax oats, and Olli barley. At the time of planting the frost line was nine inches below the surface; on June 5 it was 11 inches; on June 24, it was 24 inches and at the time of harvest, 90 days after seeding, the permafrost had receded to three feet and eight inches. During those 90 days the minimum night temperatures varied from 35°F. to 56°F. and the maximum day temperatures from 62°F. to 81°F. When the crop plots were harvested, the wheat showed a yield of 25 bushels per acre and both oats and barley, 30 bushels per acre. In view of the Norman Wells successes, cherries, plums, crabapples, and bush fruits were forwarded for planting in the spring of 1950, but results must wait for time.

Very little thought has been given to livestock, but that too will change. When C. C. Bevan, farming at Peace River, got the urge to try farming at Yellowknife, he took six Holstein cows and a thousand hens to that mining town, by air. It was a big gamble and costs were high. People told him he could not succeed with poultry in that latitude. The winters, they said, would be too cold and too long and too dark for hens. But instead of dying or taking a long holiday, Bevan's hens laid eggs at a rate that would have represented good production in any part of Canada.

For the first year and more, almost all the feed for Bevan's animals had to be imported, and during the winter of 1947, his Holsteins ate hay that was delivered by air express at a total cost of \$175 a ton. Fifty-five cents a quart for milk and a dollar a dozen for eggs didn't seem too much when feed costs were considered. Those high prices for essential foods served to emphasize the need for greater agricultural effort. But when the remark was made to one Yellowknife trapper that "the necessities of life come pretty high in these parts," the old-timer retorted, "That's right, and the danged stuff is hardly worth drinking when you do get it."

A few animals had been kept at Fort Simpson and down at the mouth of the Mackenzie River, Bruno Weidman, as we saw

him in 1948, was the proud owner of a thriving flock of hens and Aklavik's only cow. This humble cow could not be considered a contender for a Royal Winter Fair championship but as the only member of her race for hundreds of miles around, probably no cow in all Canada gave milk so highly prized. Where one survived comfortably, there is no reason why more cows could not be kept.

No, the Northwest Territories cannot boast many domestic animals but when the feed is produced and shelter provided, livestock can be expected to thrive. The north, however, is not poor in wild meat-producing livestock, buffalo, musk-ox, caribou, and other species. A few thousand wood buffalo and plains buffalo grazing west of Fort Smith are multiplying, and the attempt to propagate reindeer in semi-domestication close to Arctic waters has been successful. Canada's barren land caribou may number five million, although some estimates have been many times higher. In any case, those wild herds of the north might be developed and extended to furnish more food for protein-hungry people here and elsewhere.

Mining will become increasingly important; fishing will be an important industry; certain parts of the north will yield a merchantable timber or a dwarf type of tree growth suitable for wood pulp and fuel; and fur-bearing animals and meat-producing stock can be produced in abundance. Agriculture's future is rather less clear because nobody knows how much soil is available. Agricultural soil down north from the present farming communities is not widely distributed. Neither rock outcrop nor moss has anything to offer in agriculture and muskeg has no use until drained.

Herein lies one of the serious handicaps to northern development. But let there be no mistake, there are scattered areas of soil and the day will come when every acre will be used for a growing population needing fresh foods far exceeding present production. Areas suitable for agriculture should be mapped and then it may be concluded that northern soil, within the limits of the midwestern provinces and beyond them, is more abundant than early guesses had suggested.

Farming will expand northward in Manitoba, Saskatchewan, and Alberta. Substantial areas of clay soil west of The Pas and north on the Hudson Bay Railway must be considered for settlement. Test plots at Mile 137 and Mile 185 on the Hudson Bay Railway have given excellent yields of grains. And in the district of upper Peace River where farming is well established, a further two to four million acres suitable for farming may be occupied.

In both the Yukon and the Northwest Territories, the most promising areas for farming are along the rivers and beside the lakes. It now appears that the Yukon has at least half a million acres for which some use in an agricultural programme will be found. The Northwest Territories will have more. The valleys of the Mackenzie, Hay, Slave, and Liard rivers could almost certainly furnish over a million acres suitable for agriculture. W. D. Albright, who was for many years Superintendent of the Dominion Experimental Station at Beaverlodge and knew the north, believed that the valley of the Liard might have an agricultural future similar to that of the Peace River district.

Notwithstanding the good pedagogical intentions of former years, it is a reasonable conclusion today, that if there is a northern limit to cultivation in Canada, that limit is determined by soil or the lack of it, rather than by latitude or winter cold. And when the master of the industrial community at Norman Wells can ripen tomatoes and cucumbers it is not improbable that he will produce watermelons on his deep muck soils close to the fascinating land of midnight sun.

Not so easy to see as the extension of the frontier through irrigation and through northward movement, but just as real, is the change in rural thinking and agricultural ideals. The farmer accepted the scientist as a partner. Science changed many things and nobody felt the effects of research more than the man on the land. Men working in laboratories furnished new and more suitable varieties of crops, permitting farmers to meet the thrusts of early frosts, plant diseases, and sawfly. Science created changes in practices related to breeding, sani-

tation, and feeding of farm animals; it made for better use of soil and better control of pests and left its mark on everyday practices.

One of the bright examples of the recent influence of science upon farm practices has to do with insecticides and herbicides. Unfortunately, in most cases it was not until weeds were well established that an organized fight was launched against them. The best care was not always exercised against introduction of weeds in seed brought to new districts. The Alameda Agricultural Society went on record in 1899 as believing "that the state of agriculture would be benefitted by a more thorough supervision of noxious weeds." Weed legislation was written ultimately by all the provinces but not before the weeds were costing the grain growers millions of dollars a year. A hundred million dollars was the estimate of the annual loss to farmers in all Canada in recent years. In spite of these facts, however, scientific study of weed control is one of the youngest branches of research. Chemical warfare on weeds dates only from 1896 when a French grape grower discovered that the Bordeaux mixture, with which he sprayed vines, blackened the mustard leaves. The earliest weed-killing agents used on this continent were iron sulphate, common salt, and sodium arsenite. Crude oil, sodium chlorate, and many other chemical compounds were used with limited success, and then came the discovery of the selective killers.

But once it really got to work science revolutionized weed control methods. It seemed fantastic that any product would kill broad-leaved weeds without destroying the cereals or grass in which the weeds were growing. But 2, 4 di-chloro-phenoxy acetic acid, happily generally recognized by its abbreviated nickname, 2, 4-D, was a product of wartime research. Here was a plant hormone able to produce a death-dealing physiological upset in certain plants and not in others.

D.D.T. and 2, 4-D were discovered about 1940, but the first 2, 4-D was not produced commercially until 1944. In the next year it was used on an estimated hundred acres of crop land in

Western Canada. There was a certain mingling of enthusiasm, scepticism, and fear, when the subject of selective weed killers was raised at that time, and a few caragana hedges and gardens to the leeward side of the experimental plots suffered destruction. But the experimental results were favourable and a small revolution in field practices followed.

What was the story? In 1947, half a million Western Canadian acres were treated with 2, 4-D. In 1948, application rose to four million acres, in 1949 to eight million and in 1950 to over thirteen million. This product could knock out mustard and Frenchweed and a lot of other offenders without harming the cereal crops. It seemed uncanny but it worked and farmers accepted it with enthusiasm. The use of 2, 4-D did much to bring farming people and research workers together.

There were other and encouraging trends to be seen at the midpoint in the century. One was a new and finer appreciation of the educational equipment that men and women need for life on the land, and another was a new viewpoint about home building on farms. The growing interest in shelter belts, fruit trees, and home conveniences reflected a new sense of "here to stay." There was a growing demand for farm electrification. The need was for mechanical aids for the diversified farm and the home. Electrification changed the face of those rural areas which it reached, but the benefits would have to come slowly in many prairie areas where water power was limited. In 1950, about 25 per cent of the farms of Canada and less than 20 per cent of those in the midwestern provinces had electricity compared with 50 per cent in the United States, 25 per cent in England and Wales, and 75 per cent in New Zealand. Of the midwestern provinces, Manitoba was in the best position to extend electrification and was taking advantage of its resources. By 1952, over a half of Manitoba's farms were being served by the Manitoba Power Commission with a programme calling for power lines to reach 5,000 additional farms a year. Farm electrification is capable of doing so much to ease the load in the farm home and barnyard and it is recognized as a factor which would help

to make farm life so attractive that young and old would not wish to leave it. The wild force of streams like the Winnipeg River has a job to do in brightening rural homes, and in the late forties all three prairie provinces were working on electrification projects.

That fresh determination to build for the future, and build for permanency, was easy to identify. One hundred and seventy-eight young men from Manitoba farms were presented with the question: "When you are able and ready to retire from active farming, where do you think you would want to live?" Nobody named Eastern Canada, but 18 per cent voted for the West Coast and 6 per cent for Florida, California, or some other United States point. The big surprise was that 76 per cent named the home farm or a near-by town or city in the midwest.

Unlike many of those on farms during the depression years, the western farming people of 1950 were farming by choice. People who could be attracted by life elsewhere had opportunities to rehabilitate themselves in urban society during the war and postwar years. Those who remained on farms were the ones for whom farm life held the rewards of independence, freedom, dignity, and challenge. It is more than wishful thinking when we say that many young people have acquired a vigorous enthusiasm for life on the land, for agricultural traditions, and for the challenge of growing plants and animals. Canadian agriculture possesses the elements to inspire as well as to produce.

Linked with the will to build for the future is a new resolve that conservation is urgent and that it is everyone's responsibility. No person has a bigger interest in it than the farmer upon whose soil the world's people depend for bread and meat and other food products.

The West had a big job in land use. Soil surveys were well in hand but in spite of that, the year 1950 found too many farmers continuing to operate on sub-marginal land. It was land that would support grass and herbivorous animals well, but should not be growing grain crops. Good land use is good con-

servation. And all loyal Canadians, east and west, should be on guard against soil losses in any form.

Canadians hear much about their natural resources such as oil, forests, and minerals. Valuable as these are, the stuff for lack of which the world is most likely to suffer is not uranium or nickel or gold or petroleum or wood pulp, but good food-producing soil. Farm soil is Canada's most priceless possession. And of the nation's arable land, nearly three-quarters is in the midwest, between the region of the Red River and the Rocky Mountains. Thus western farms must be seen as the greatest of Canadian assets, a great world asset and the backbone of Canadian agriculture. Seasons will come and seasons will go, but a thousand years hence, if it rains, Canada may be fairly sure of a good crop of bread wheat between the Red and the Rockies, and a sturdy breed of farmers to grumble about the price and get right out on the land again in the following spring.

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